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PROBLEMS OF FEDERALISM IN THE AIR AGE—PART II

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Anti-Aircraft Campaigns in the New York Area

In Part I of this paper it has been shown that the landowner-airman conflict has centered, generally, in tort law, the law of real property, and the fifth amendment. An archaic maxim has given way under the pressure of circumstances to a more intelligent and compromising resolution; a number of theories of airspace right have been forged upon the anvil of judicial decision ranging from conservative to progressive, generally within the ambit of civil actions of nuisance, trespass or the taking of property.

With the post-war expansion of civil air transportation, the increase in urban housing development with the return of veterans, and the increased birth rate during the war years, both the municipal airports and the residential areas surrounding them suffered congestion, and the airport and its neighbors fell into serious conflict. It is not surprising then that the smouldering unrest caused by air traffic encroaching upon the surface dweller should first be fanned into flame in the congested New York area. The heavy populations of great cities adjacent to airports, however, have not always found these remedies adequate and consequently have utilized the device of legislation to alleviate this annoying invasion of their peace. Background for this legislative pattern has been found in similar restraints on surface vehicles.[88] Thus local ordinances based upon the police power have been upheld[89] and the location of the airport beyond the city limits imposes no barrier to the exercise of this power.[90] Moreover, regulation of the activities of the airman are not necessarily to be confined to the locus of the airport but may be enforced anywhere over the jurisdic-

[88] Commonwealth v. Kingsbury, 199 Mass. 542, 85 N.E. 848 (1908).
[89] Tatum v. Hallandale, 71 So. 2d 495, 41 ALR 2d 1308 (1954); Silverman v. Chattanooga, 165 Tenn. 642, 57 S.W. 2d 552 (1933).
[90] Silverman v. Chattanooga, *supra* n. 89; compare Birmingham v. Lake 243 Ala. 367, 10 So. 2d 24 (1942).

tion. Thus the action of a New York police commissioner pursuant to a city ordinance in suspending permits to tow advertising banners after a pilot operating under such a permit ". . . made a forced 'upside-down emergency landing' in Dreamland Park, . . . where about 800,000 persons were gathered, and wrecked his plane, . . ." was held a proper and valid exercise of the police power.[91]

In 1948 the city of New York enacted a law to regulate aviation activities in and over the city. It proscribes parachuting, except in the event of imminent danger; take-offs and landings at any place within the limits of the city other than places of landing designated by the Department of Marine and Aviation of the Port of New York Authority; aerial advertising in the form of towing banners, dropping of pamphlets, circulars or other objects, or use of a loud speaker or sound device. Dangerous or reckless operation of aircraft, operation under the influence of intoxicating liquor, narcotics or other habit forming drugs, or the operation of aircraft in a careless or reckless manner so as to endanger life or property, are forbidden, and in the prosecution of such carelessness or recklessness consideration shall be given to the standards for safe operation of aircraft prescribed by federal statutes or regulations governing aeronautics. Then, broadly encompassing all of the federal civil air regulations in an incorporation by reference, the law charges any violation of its provisions to be punishable as a misdemeanor.[92]

In the Spring of 1949, the Administrator of Civil Aeronautics, with the participation of the local authorities and the airline interests, and pursuant to his power under the Civil Air Regulations "in the interest of safety" to prescribe specific airport traffic patterns,[93] drew up and adopted traffic patterns which routed traffic over the least congested areas, prescribing fixed tracks and definite altitudes to be flown in approaching and departing from the airports serving the greater New York area—Newark, La Guardia, and Idlewild.[94] This automatically made a violation of these procedures punishable by the city of New York as a misdemeanor. Soon after their promulgation, Captain George Neuhauser, piloting an aircraft for Northeast Airlines, was charged with a deviation from the airport traffic pattern while approaching for a landing at La Guardia Airport. The information alleged that Neuhauser was observed:

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[91] S. S. Pike Company v. City of New York, 169 Misc. 109, 110, 6 N.Y.S. 2d 957, 958 (1938); see also Reynolds v. Valentine, 169 Misc. 631, 7 N.Y.S. 2d 709 (1938).

[92] Administrative Code of the City of New York, Chapter 18, § 435-16.0 (July 1, 1948).

[93] 14 C.F.R. § 60.18(d) (Supp. 1955).

[94] 14 Fed. Reg. 479, 4299 (1949). A statement that the Air Line Pilots Association concurred in the patterns prefaces their promulgation.

On August 5, 1950 the Administrator announced the abandonment of ground track traffic patterns at La Guardia, Idlewild and Newark and made effective on August 15, ". . . without delay in order to promote safety of the flying public. . . ." the standard left-hand rectangular traffic patterns; 15 Fed. Reg. 5046 (1950). Ground track patterns are still in effect at Washington National Airport however; 14 C.F.R. § 60.18-7 (Supp. 1955).

> In the course of avigating an aircraft, . . . [making] a landing in an unlawful manner, in that the defendant did not conform to the traffic pattern, prescribed for the said airport, by the Civil Aeronautics Board. That more particularly the defendant, in making a landing on Runway No. 31 of the said airport, did cut into the said pattern at a point not authorized by the Air Traffic Control, and at variance with the prescribed pattern for said runway.
>
> . . . [defendant was further observed making] his final approach to Runway No. 31 of the said airport, over the southwest section of Flushing Bay, at an altitude of 800 feet and did enter the prescribed pattern for said runway at a point approximately two and one half miles north of the said approach.[95]

Figure IV indicates the prescribed traffic pattern and the point where Neuhauser entered. The allegation also charges a deviation in alti-

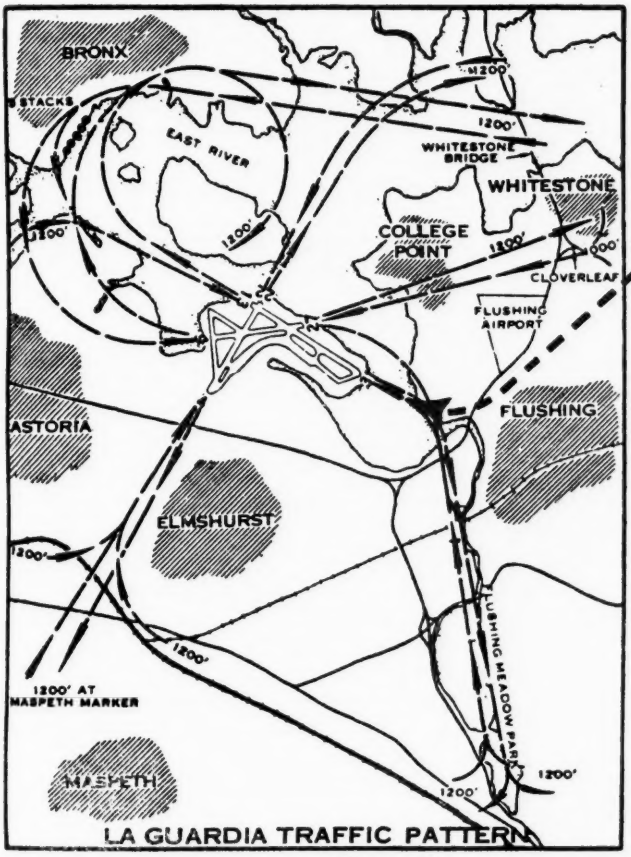

Figure IV

Federally and locally sanctioned airport traffic patterns at La Guardia Airport. Airline pilots know that "anti-noise" patterns such as these are dangerous.

[95] People v. Newhauser [sic] 197 Misc. 54, 57, 92 N.Y.S. 2d 291, 292 (City Mag. Ct. 1949).

tude; the final approach is to be begun at 1200 feet whereas it was alleged that Neuhauser entered the pattern at 800 feet.

The court denied a motion to dismiss which claimed that the ordinance was an unlawful delegation of power by the legislature[96] and was also repugnant to the following clause in the New York State constitution:

> No act shall be passed which shall provide that any existing law, or any part thereof, shall be made or deemed a part of said act, or which shall enact that any existing law, or part thereof, shall be applicable, except by inserting it in such act.[97]

Were such practice allowed, the defendant contended, an ordinance which incorporates other statutes by reference could impose laws the import of which the legislature may not be fully cognizant, whereby a bill could become a law which would not receive a legislator's approval if he fully understood it.[98] Principally the defendant cited in support of this contention, *Darwager v. Staats,* where the state of New York attempted to apply to intrastate transactions the codes promulgated for interstate transactions by providing that codes adopted under the National Industrial Recovery Act, when approved by the President and filed with the New York Secretary of State shall be in force in New York. The New York Court of Appeals deemed this legislative act void as an unauthorized delegation of legislative function contrary to the constitution of the state, and offensive under the provision against embodyment by reference.[99] Neuhauser also relied on a New Jersey case—a state with a constitutional provision identical with that of New York[100]—which refused to recognize such an act of reference where it could not be struck from the particular act without essentially altering or impairing it.[101] But the court disagreed, holding that the legislation under *Darwager* was a mere shell leaving to national bodies or officials the power to form therein the laws of the state of New York which would make applicable to a new body of people—those engaged in intrastate activities—laws which hitherto had not applied to them.[102] whereas the case at bar was nothing more or less than an enforcement measure in aid of federal legislation merely giving added sanction to rules which nevertheless had to be obeyed. It cited, in support, *People of New York v. Mailman*[103] upholding the mere enforcement of existing federal laws already applicable to the citizens of the state and two cases which upheld the conformance of local to state and state to federal regulation,[104] where compliance had already

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[96] New York Const. Art. III § 1 provides:
Legislative power. Section 1. The legislative power of this State shall be vested in the Senate and Assembly.

[97] New York Const. Art. III § 16.

[98] People v. Banks, 67 N.Y. 568, 576 (1876).

[99] Darweger v. Staats, 267 N.Y. 290, 196 N.E. 61 (1935).

[100] New Jersey Const., Art. IV § 7 par. 4 (1844) now Art. 4, § 7, par. 5 (1947).

[101] State v. Larson, 10 N. J. Misc. 384, 160 Atl. 556 (1932).

[102] Darweger v. Staats, 267 N.Y. 290, 307, 196 N.E. 61, 67 (1935).

[103] 293 N.Y. 887, 59 N.E. 2d 790 (1944) *affirming* 182 Misc. 870, 49 N.Y.S. 2d 733 (1944).

[104] Mosner v. Haddock, 181 Misc. 486, 46 N.Y.S. 2d 343, affirmed 268 App. Div. 752, 48 N.Y.S. 2d 802 (1944); People v. Lewis 295 N.Y. 42, 64 N.E. 2d 702 (1945).

been decreed by the higher jurisdiction. Against a claim of possible unfamiliarity with the federal regulations by the legislators, suggesting a possible delegation of legislative authority, the court noted that the local authorities had actually participated with the federal agencies in drawing up the three traffic patterns in question and attached no importance to the fact that the embodiment involved scores of other regulations with which, because of their magnitude and divergence, the legislators could not have been familiar.

Neuhauser's final contention—that since Congress has exclusive authority to regulate air commerce and has so done, hence the exercise of police power by a state or municipality in a field which the federal government has occupied is unconstitutional—was also rejected. Stating that the enactment of the local law in no way interfered with nor affected commerce, the court moved from considerations of federal constitutionality involving the invasion of a field which Congress has chosen to occupy, to state constitutionality involving an alleged overextension of the scope of municipal legislative power and cited *People of New York v. Lewis*[105] where a local penalty was imposed, heavier than the penalty imposed by the state, for black market transactions forbidden federally, since such transactions had the gravest effect upon the property, safety and health of New York City's crowded population. In further support of its decision the court cited a Michigan supreme court case[106] where the ordinance of a home rule city enacted after the commencement of war and augmenting federal emergency price control statutes and regulations was deemed not to have unconstitutionally delegated its legislative power nor encroached upon Congress' war power, but gave no weight to a Minnesota district court decision[107] (cited in defendant's brief) holding that certain sections of the Minnesota Aeronautics Act, which required that aircraft and pilots operating in Minnesota have federal licenses were unconstitutional (state-wise) because they constituted an unwarranted delegation of legislative authority. The fact that both the black market and the emergency price control municipal sanctions were war-time measures (when emergencies may require enactment of statutes or ordinances under the police power which might be held improper in normal times) was not considered. Concluding, the court held that there is nothing which precludes New York City—a home rule city[108]—from passing local laws having for their sole purpose the proper and effective enforcement of federal regulations, for the protection of the security, welfare and health of its people. Infractions of air traffic rules are hard to prove. Captain Neuhauser was acquitted on the facts, reserving appellate review of the constitutional question for another day when a conviction can be had.

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[105] *Id.*

[106] People v. Sell, 310 Mich. 305, 17 N.W. 2d 193 (1945).

[107] Nieman v. Brittin, 1 CCH Av. Cas. 558 (2d Dist. Minn. 1935).

[108] The grant of power to the municipalities by the State has its origin in the Home Rule Amendment to the Constitution adopted in November 1923. New York Const. Art. IX § 12.

A highly practical explanation of the need for local control of flight activities was given by Chief Walter E. Klotzback, Chief of the Emergency Division of the New York City Police Department:

> Local Law 55 is a safety law. It is intended for the itinerant flyer. It enables any violations of a rule of the CAR to be prosecuted in the Magistrate's court as a misdemeanor.
>
> The idea behind the whole thing is this: Take a fellow flying over the city enroute Boston. He will not land at the Staten Island airport. He will land on a golf course. We charge him with a violation. He has failed to comply with the CAR. We will fine the fellow twenty-five or fifty dollars if the guy gets real tough. We then file an affidavit with the CAA supported by two witnesses. They don't have punitive enforcement but may suspend, revoke or even qualify the lad's license.
>
> The CAA regulations didn't properly control: the flying of captive balloons; the using of airplanes for advertising; the dropping of objects; parachuting as a stunt or exhibition from an airplane. There had to be some way of controlling these things. It had happened three or four times that parachutists had dropped into Times Square. All we could get them on was Section 43 of the Penal Law — acting in a way that might seriously endanger another.
>
> Now we prohibit: sky writing; everybody who has a forced landing to report to the police within ten hours — this is to prevent flying away crates that should be dismantled and towed away; advertising material; loud speakers; banner towing; dropping of objects; use of captive balloons of a size not approved by the CAA and within a certain area; conjested areas for training purposes — no training over New York City; parachute stunts and acrobatics other than for emergency use.
>
> Here is the kind of things we are troubled with: They call us up and want permission to drop 5,000 green carnations on the St. Patrick's Day parade marchers. The March of Dimes wants to drop bags with ten-cent pieces in them. The Republicans want to tow ten to twenty "dirigibles" sixty-five feet long, twenty feet wide by automobile up Broadway. "You can't do it. You are guiding an aircraft." So they towed them around Manhattan Island by tug boat. The things broke away — we told them they would. A fellow opens a gas station within three or four miles of one of the larger airports. He buys a balloon and uses it for advertising purposes. We prohibit this.
>
> We are not interested in the scheduled airlines. The scheduled airlines are self-policing. Their entire procedures are far ahead of the minimum requirements. We are only interested in the Sunday warrior who flies down Fifth Avenue or through the Holland Tunnel.
>
> The Neuhauser case was a test of the law. He was one of many flagrant violators who refused to comply with the instructions from the tower. We were getting a tremendous amount of complaints. "What were we doing about it?" We showed them what we were doing. We grabbed one of those fellows. We put one of our men in the tower. We have observation patrol. We follow the conversation on the radio . . .
>
> The CAA is interested in safety of flight and of those flying. Our duty is to protect everybody, both in the air and on the ground. The CAA's interest could not very well get itself down into a local atmosphere. Their interest is in regulating aircraft. The CAA

> prosecutes you passively. We prosecute you actively. We use punitive methods. For wrongdoings the CAA uses suspensions and revocations. We will fine you. Or we will throw you in the can.

And so the matter stands. During the Neuhauser prosecution the federal and local authorities had a "falling out" on the matter of who should initiate prosecution. Thereupon the New York police were "dismissed" from the La Guardia Airport control tower, which is operated by the Civil Aeronautics Administration. Nevertheless "Local 55" is still law and stands ready to throw an airline pilot "in the can" for any deviation from flight paths which, from time to time may be promulgated by the Administrator of Civil Aeronautics. Yet these "safety measures" which are in truth anti-noise patterns, are by actual airline pilot testimony, often dangerous procedures.[109]

In upholding Local 55 Judge Ramsgate stated:

> The primary purpose of air control over any area is to secure the public safety and general health of the people. It cannot be said that aircraft flying at low altitudes and over populated areas are not a hazard. The local law involved herein is, in essence, nothing more nor less than an enforcement measure in aid of Federal legislation to regulate aircraft within the boundaries of the municipality. The air patterns adopted merely set up a lane of traffic that aircraft must follow to carry them away from populated areas, thus protecting the inhabitants below as much as possible. The law of gravity has never been repealed. Whatever goes up must come down. It is common knowledge that through no fault of a pilot or those servicing aircraft, the motor or motors may stop. Therefore the aircraft must immediately descend and if it follows the pattern set out by the civil aeronautics authorities, and incorporated in Local Law No. 55, the chance of its landing or crashing in populated areas is lessened, since, if following the pattern, it should not be over populated areas.[110]

This represents the traffic patterns as safety measures and adds force to the court's decision but does not contribute to its validity. Indeed it justifies the adoption of the patterns in that such adoption operates in the field of safety—unquestionably the most vital function to which the municipality is devoted. But whether or not the purport of the ordinance falls within the scope of the fundamental functions of a municipal government—that of protecting the health, safety and morals or even welfare of the people—was not in dispute. What was strongly in dispute was whether legislative authority in the intricate field of air traffic regulation over a municipality could be delegated. The federal administrators are not infallible and could therefore enact a dangerous measure whereupon it would become a law of the city without the city legislature having itself the expert knowledge, or having at its avail a commission with the knowledge to advise it. Indeed this is precisely what happened in the promulgation and adop-

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[109] See testimony of Harold Sherwood, Captain, Trans World Airlines, Appendix to Plaintiff-Appellees' Brief, pp. 121-156, 201 F. 2d 273 (2d Cir. 1952).

[110] People v. Newhauser [sic] 197 Misc. 54, 59, 92 N.Y.S. 2d 291, 296 (City Mag. Ct. 1949).

tion of the anti-noise patterns. In its opinion the court mentioned two collisions by aircraft with tall buildings in New York City but the irrelevance of these accidents is obvious. They involved aircraft lost in the overcast whereas the case at bar was dealing with anti-noise patterns which are flown only in the immediate airport area during visual flight, requiring constant ground reference. Furthermore it is significant that these patterns were prescribed in 1949, some time before the unfortunate series of crashes in the New York area had occurred. As the court said, should an aircraft experience a complete power failure at a low altitude, it would indeed save lives were it to fall in open land, but with multi-engine aircraft this possibility would be *extremely* remote; what generally happens when a crash occurs is a partial power failure whereupon the aircraft, through some additional trouble, falters on the remaining power somewhere between the initial power failure and the airport. Meanwhile its shallow turn of wide radius necessitates a deviation from the prescribed path. In truth the traffic patterns were a tactic intended to appease a populace distraught by the continual presence of low-flying aircraft. That the measure did not contribute to safety is shown by testimony concerning these same anti-noise patterns taken a few years later during the *Cedarhurst* controversy.[111] There it was adduced that turning or maneuvering an aircraft immediately after take-off or before landing in order to conform to such patterns may require the pilot to exceed the limits of optimum operational speeds.

Nor did the issues at the Neuhauser trial elicit the hard fact that anti-noise patterns may cause danger through increasing the fastest growing hazard to air travel—the mid-air collision. Experienced pilots concur in the opinion that the necessity of following a ground track during airport approaches or departures must in some measure subtract from that one-hundred percent quantum of attention *demanded* of the pilot by changing aircraft flight circumstances and essential traffic during the landing maneuver. Of this the court could not have been cognizant; it had to rely on crash statistics and could know nothing of near-misses. But if fixed altitudes and ground tracks continue to be enforced, courts may soon have this information merely by taking judicial notice of the public records of accidents in the vicinity of metropolitan airports.

After a series of three tragic airline crashes in Elizabeth, N. J. in the brief span of fifty-eight days from December 16, 1951, to February 11, 1952, a fourth occurred in populous Jamaica, N. Y., whereupon a Queens grand jury hearing was ordered.[112] Its object was to investigate

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[111] *Supra* note 109.

[112] The following is a summary of a presentment dated July 2, 1952 by the April 1952 Grand Jury for the County of Queens, Michael C. Krasner, Foreman, to the Honorable Alfred J. Hofman, County Judge of the County of Queens in regard to an inquiry ". . . into the question of whether any criminal or culpable negligence sufficient to warrant action by any agency of . . . [the] county . . . with respect to the airplane crash in Jamaica on April 5th, 1952 and into the adequacy of safety regulations governing air traffic insofar as it affects or may affect the safety of the people of Queens County."

the operation of air transportation over its jurisdiction insofar as it affected the safety, welfare, health and comfort of the plane and its passengers and the citizenry of Queens. The jury findings recognized the national and international aspects of air traffic which generated the disturbance but to avoid chaos its control required uniformity of safety rules and sanctions against violators. The federal government had taken the lion's share of control over air traffic leaving only two possible areas for local action—culpable negligence or public nuisance, both violations of the penal code. But culpable negligence or recklessness resulting in manslaughter,[113] implies a disregard of the consequences which may ensue from the act; an indifference to the rights of others.[114] The aircraft pilot guides a device with a monstrous destruction potential but to wield it would bring the temple down upon his head and the urge for self preservation would preclude the imputation of such motive when his aircraft crashes. The cause of the crash under investigation was determined to have been a mechanical defect in the fuel system; any possible dereliction of duty in the inspection of this component must have occurred outside of the Queens jurisdiction at remote Fort Lauderdale, Florida, far from where the forces of destruction were unleashed—reemphasizing the importance of federal control.

The area of public nuisance was explored: a crime against the order and economy of a state consisting of an unlawful act or omission against a considerable number of people which annoys, endangers or injures their comfort, health or safety or renders them insecure in life or the use of property.[115] However, if the business engaged in is lawful and is properly conducted and not operated in a negligent manner, its operation cannot be held to constitute a public nuisance. Moreover, when the conduct of the activity conforms with the usual customs or practices in the art it is presumed to be properly conducted.[116] The

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[113] N.Y. Penal Law, §§ 1052, (3) and 1053-a (1944).

§ 1052—Manslaughter in second degree defined.

Such homicide is manslaughter in the second degree, when committed without a design to effect death:

* * * *

3. By any act, procurement or culpable negligence of any person, which, according to the provisions of this article, does not constitute the crime of murder in the first or second degree, nor manslaughter in the first degree.

§ 1053-a Criminal negligence in operation of vehicle resulting in death.

A person who operates or drives any vehicle of any kind in a reckless or culpably negligent manner, whereby a human being is killed, is guilty of criminal negligence in the operation of a vehicle resulting in death.

[114] People v. Bearden, 290 N.Y. 478, 482, 49 N.E. 2d 785, 787 (1943); People v. Angelo, 246 N.Y. 451, 457, 159 N.E. 394, 396 (1927).

[115] N.Y. Penal Law, § 1530 (1944).

§ 1530. Public nuisance defined.

A "public nuisance" is a crime against the order and economy of the state, and consists in unlawfully doing an act, or omitting to perform a duty, which act or omission:

1. Annoys, injures or endangers the comfort, repose, health or safety of any considerable number of persons; or,

* * * *

4. In any way renders a considerable number of persons insecure in life, or the use of property.

[116] People v. Accurate Brass Co., Inc. 271 App. Div. 1031, 69 N.Y.S. 2d 306 (1947); People v. Vandewater, 250 N.Y. 83, 88-89, 164 N.E. 864, 865-866 (1948).

jury concluded that low-flying aircraft while enroute could be in violation of the federally prescribed safe altitudes of flight over congested areas,[117] but they are specifically exempted from such violation by existing federal regulations when engaged in take-offs and landings. This left the question of whether take-offs and landings in the Queens area were in conformity with the usual custom and practice and evidence presented to the Grand Jury brought forth an affirmative conclusion.

The grand jury, apparently going beyond a grand jury's general function of determining whether there is a sufficiency of facts to support an indictment, unhappily concluded that in view of the present state of the law, local authorities in New York are powerless to take any action to safeguard the life, property, welfare, comfort, health, safety and well-being of its citizens endangered by low-flying planes. The same factors in low flying which bar the use by local authorities of the public nuisance statute to punish safety violations, apply with equal force to the problem of noise from low-flying planes in taking off and landing or in pre-flight and maintenance run-ups.[118]

Cedarhurst Raises the "Umbrella of Death"

In 1953 New York International Airport (Idlewild) was already a vast installation consisting of more than ten miles of runways and seven and one half square miles of land. It handled 87,885 flights in both domestic and international operations, the latter being ninety-four percent of the New York district's scheduled overseas air passenger traffic. The airport, at the confluence of airways fingering across the United States and reaching out to foreign lands, plays a starring role in world air commerce.

The incorporated village of Cedarhurst, embracing approximately a square mile area and, in 1953, comprising some 6,500 residents is, at its nearest point, 4,000 feet from the eastern boundary of Idlewild and 9,200 feet from the end of a runway and in line with an approach zone. Within its delegated powers as a home-rule municipal corporation it enacted, to become effective on June 15, 1952, an ordinance which provided in substance that it shall be unlawful for any person,

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[117] 14 C.F.R. Part 60, Air Traffic Rules (1952);
§ 60.17 *Minimum safe altitudes.* Except when necessary for take-off or landing, no person shall operate an aircraft below the following altitudes:
* * * *
(b) *Over congested areas.* Over the congested areas of cities, towns or settlements, or over an open-air assembly of persons, an altitude of 1,000 feet above the highest obstacle . . . .

[118] What legal basis supports the commission regulation of the Port of New York Authority that "no jet or turbo-prop aircraft may land or take off at an air terminal without permission"? Assume that a scheduled citizen air carrier with a route specifying New York City as a terminal desires to serve this route with a jet aircraft, all of which have been federally approved and certificated. Or suppose that a carrier of a foreign nation holding rights granted under treaty and executive agreement to operate commercial services to New York City, U.S.A. with a jet aircraft conforming to ICAO standards, which the United States has agreed to recognize, also wishes to begin services. Assume further that the airport operational noise level of the aircraft is within tolerances for safe airport operation. Could PONYA bar these aircraft from operating into its airports if in its opinion "they have noise characteristics which are intolerable to the airport's neighbors"?

1. to operate or cause to be operated an aircraft at an altitude below 1,000 ft. over the surface of the Village.
2. to maintain or use the altitudes below 1,000 ft. over the Village for so-called turning or maneuvering zones or the approach and transition zones claimed to have been established for the New York International Airport by the Administrator of Civil Aeronautics; or
3. to carry by air at altitudes of less than 1,000 ft. over the Village any gasoline or other explosives or inflammable material.

The ordinance provided a penalty of one hundred dollars for each violation and also declared any person who violated it to be guilty of disorderly conduct punishable by imprisonment in a county jail or workhouse for a term not exceeding six months or by a fine not exceeding fifty dollars or both.[119]

Aircraft operating to and from Idlewild must perforce fly over Cedarhurst at less than 1,000 feet in landing and taking off under a variety of conditions. Figure V dramatically demonstrates that enforcement of the ordinance would substantially restrict the operation of aircraft in interstate and foreign commerce to and from New York International Airport and would at times cause the airport's complete shutdown. Additionally, if other communities adjoining the airport were to pass similar ordinances, it would, for all practical purposes, have to be closed. The Port of New York Authority, the major scheduled airlines, individual airline pilots, the Air Line Pilots Association, and the Civil Aeronautics Authority joined to fight the ordinance.[120]

The aviation interests relied first upon the argument of federal preemption by Congress in the field of interstate commerce to the exclusion of the states. Assuming that the ordinance were not in conflict with federal regulation it would be invalid nevertheless as an invasion of a field exhaustively occupied by Congress where even coincident legislation is repugnant. Where Congress has constructed a framework of legislation and an administrative agency has filled the interstices as has been done in air commerce a finding can be made therefrom of Congress' intention fully to occupy the field, even if a particular area were not specifically regulated. But the Cedarhurst ordinance actually conflicts sharply with the federal legislative structure grounded on the commerce clause hence even if there were no showing of pre-emption, the ordinance violates the supremacy clause of the Constitution. Although invasion of a pre-empted field and conflict with federal legislation are individually sufficient to strike down the ordinance, yet a further reason for its invalidation is that it constitutes an undue burden on interstate commerce. States may not impede the free flow of commerce, or regulate those phases of it which

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[119] New York Village Law § 90.

[120] All American Airways, Inc. v. Village of Cedarhurst, 106 F. Supp. 521 (E.D. N.Y. 1952); All American Airways, Inc. v. Village of Cedarhurst, 201 F. 2d 273 (2d Cir. 1952); Allegheny Airlines, Inc. v. Village of Cedarhurst, 132 F. Supp. 871 (E.D. N.Y. 1955); Allegheny Airlines, Inc. v. Village of Cedarhurst, 238 F. 2d 812 (2d Cir. 1956).

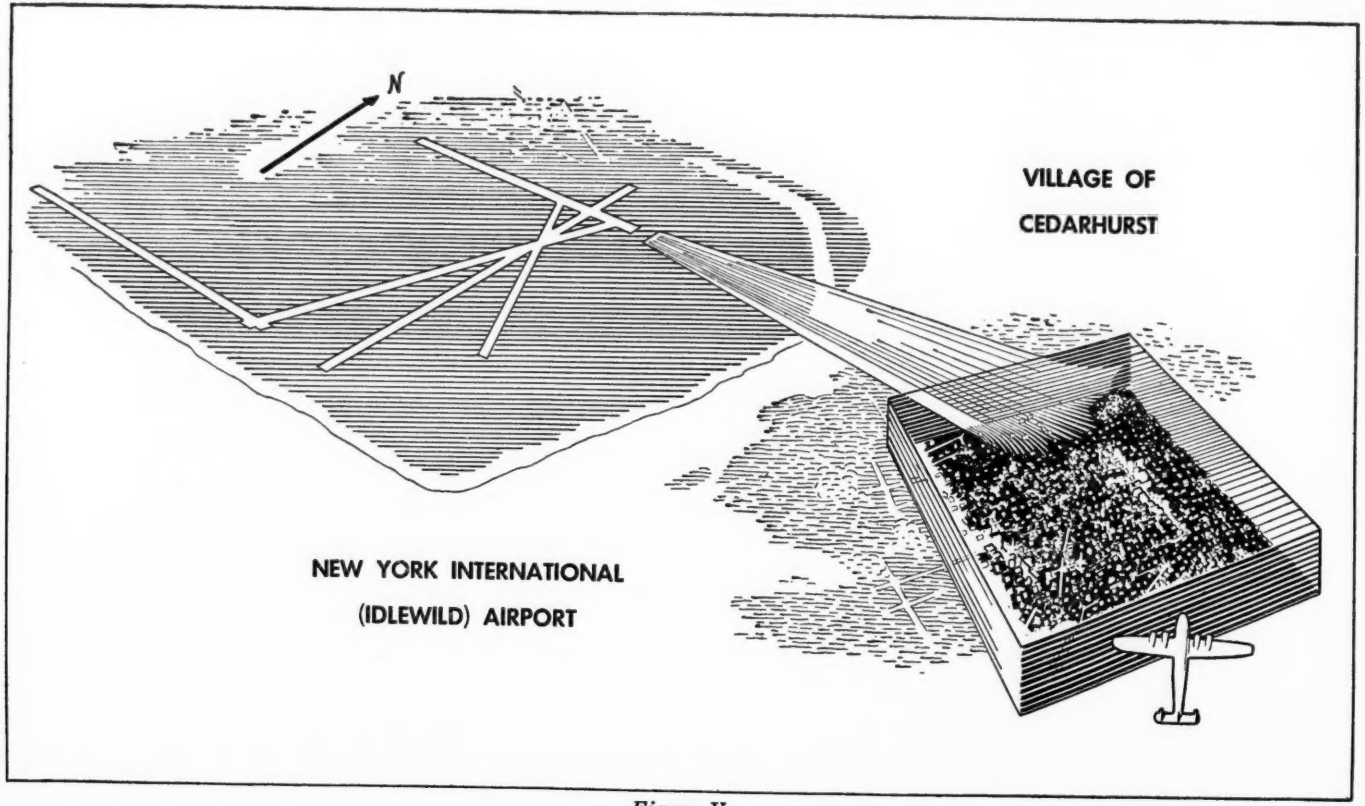

Figure V

"Local exactions and barriers to free transit in the air would neutralize its indifference to space and its conquest of time."
(Mr. Justice Jackson concurring in Northwest Airlines v. Minnesota, 322 U.S. 292, 303 [1944])

call for conformance to a universal pattern. The barrier built by the ordinance would distort this uniformity.

The defendant contended that both legislative intent and judicial interpretation have preserved at least some area of air for the surface parcel. Both New York in its common law and New York and New Jersey in their delegation of powers to the Port of New York Authority have recognized this by including among them the power of eminent domain. Further Congress recognized it in both the Civil Aeronautics Act and the Federal Airports Act by specifying the power to acquire air easements.[121] Hence both federal and state recognize the reservation of some area of air for the landowner. The State of New York has never delegated its police power to the federal government. The greatest concentration of air tragedies such as those in the New York area occurred principally within a widening path extending outward from the runway threshold. Cedarhurst is within such a path, therefore the ordinance is intended to safeguard not only the surface dweller's property rights but his comfort and life. Congress in specifying navigable airspace in its legislation has recognized two strata or areas —navigable and subnavigable airspace. In the federal legislation navigable airspace is that above the minimum altitude of flight which is 1,000 feet in congested areas.[122] No public right in the subnavigable airspace has been decreed in the Civil Aeronautics Act. Hence when the Civil Aeronautics Board attempts to regulate flight activity in the subnavigable airspace it is either going beyond its powers or Congress has made a too broad and loosely defined delegation. In either case, whether an invalid construction by the Board or whether the act itself is an improper delegation, to assert federal control in the subnavigable airspace area would be an overextension of delegated power and constitute a taking of property for public use without compensation—a fifth amendment violation.

Although all facets of landowner-airman relationship were touched upon during the course of legal action by the many interested parties, the court, in deciding,[123] devoted itself to the task of determining what it considered the basic question: whether Congress pre-empted the field of regulation and control of the flight of aircraft, including the fixing of minimum safe altitudes for take-offs from and landings at airports, despite that such altitudes might be less than 1,000 feet. Specifically what, if any, airspace below the altitude of 1,000 feet has Congress determined to be navigable airspace, subject to flight control?

The court emphasized the need for federal control of all phases of transportation, particularly that of air travel, and quoted a Supreme Court expression by Justice Jackson on congressional control of air commerce:

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[121] 52 Stat. 985 (1938), 60 Stat. 170 (1946), 49 U.S.C. §§ 452c21 1101 (6) (1952).

[122] *Supra* n. 117.

[123] Allegheny Airlines, Inc. v. Village of Cedarhurst, 132 F. Supp. 871 (E.D.N.Y. 1955).

> Congress has recognized the national responsibility for regulating air commerce. Federal control is intensive and exclusive. Planes do not wander about in the sky like vagrant clouds. They move only by federal permission, subject to federal inspection, in the hands of federally certified personnel and under an intricate system of federal commands. The moment a ship taxis onto a runway it is caught up in an elaborate and detailed system of controls. It takes off only by instruction from the control tower, it travels on prescribed beams, it may be diverted from its intended landing, and it obeys signals and orders. Its privileges, rights and protection, so far as transit is concerned, it owes to the Federal Government alone and not to any state government.[124]

Although the town officials of Cedarhurst, as property owners, had withdrawn their counterclaims of nuisance and trespass, the court paused to examine property rights of airspace in owners of subjacent land. The corpse of *Cujus est solum* was dug up and reinterred. The court here leaned toward the concept that the owner can lay claim only to airspace which he can use and enjoy: he has a paramount right in the superjacent airspace only in that no one can acquire a right to the space above his land which will limit whatever use he can make of it as part of his enjoyment of the land. All other airspace, particularly that which is navigable, belongs in the public domain. The court then cited the pre-eminence of Congress in the field of interstate commerce, federal pre-emption of air safety through legislative action and pursuant regulations and concluded that the states, including the Village of Cedarhurst, are precluded from enacting valid contrary and conflicting legislation.

This led to the main question at bar. Clearly Congress had the right to regulate commerce in the navigable airspace and clearly through the setting of a minimum safe altitude of flight the federal regulatory agency, supported by judicial decision, had determined that airspace 1,000 feet above the surface was navigable. Although no specific reference was found in the regulations to take-offs and landings, the words "except when necessary for take-off or landing no person shall operate an aircraft below the following altitudes" were construed as establishing a minimum altitude rule of specific applicability to these maneuvers. By judicial decision, then, federal control and regulation of traffic in the navigable airspace above the minimum safe altitude of flight is found to extend to the airspace through which aircraft must necessarily fly for take-offs and landings at public airports —it should never have been in dispute.

Upon appeal[125] the aviation interests were again upheld: although the appellant's brief contained substantially the same contentions as below, only two additional issues relative to the controversy were discussed in the decision. Using the District Court's holding—invasion and conflict in a pre-empted field—the court fortified this structure

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[124] Northwest Airlines, Inc. v. Minnesota, 322 U.S. 292, 303 (1944).

[125] Allegheny Airlines, Inc. v. Village of Cedarhurst, 238 F. 2d 812 (2d Cir. 1956).

holding that the delegation by Congress of power to the Board to prescribe safety rules was not an unconstitutional delegation as where delegations are made without guiding standards. The policy declaration of Congress in the Civil Aeronautics Act is to assure, in the public interest, the highest degree of safety in air transportation. To accomplish this Congress has delegated to the Civil Aeronautics Board the duty to set "rules as to safe altitudes of flight." In view of this construction the village of Cedarhurst had contended that the word "safe" did not denote a "sufficiently definitive standard to permit valid administrative action under the delegation." But the court disagreed. With the multiplicity of variable conditions inherent in safety control, allowance for such variability does not signal the use of too broad a structure in its delegation. There are other even less specific delegations that have been upheld by the courts. Against the allegation of a taking of private property for public use the court distinguished the *Causby* case where flights were so frequent and so low as to interfere directly with not only the enjoyment of the land, but its commercial use as a chicken farm as well. The imprecision of the volume, periods of intensity and altitudes of the flights over the village of Cedarhurst, and the lack of evidence that the flights constituted a trespass or nuisance to the village residents preclude the finding of a taking under the *Causby* doctrine.

Universality and Fair Play

Time can pass only through motion for a motionless state is eternity. Motion and its speed define distances and make them meaningful, for only through velocity—how long it takes to get there either in fact or fancy—can distances be conceived. Viewed in this light, the distance between two points is no longer fixed, but variable; what is far today is near tomorrow.

It is not difficult to realize that thrusting skyward state and municipal boundaries would stultify air commerce.[126] What is sometimes overlooked, however, is that the rapidity of flight and the instantaneousness of communications gives every function of government a "national" quality. This is not to say that all local problems shall cease to exist and that local control will soon be unnecessary, rather it urges the understanding that state, local and municipal and national and federal can no longer be associated with fixed synonyms such as near, close at hand, democratic, grass roots; or distant, centralized, national state, bureaucratic; for even as we stand the world is shrinking beneath our feet. In aviation a pilot cannot heed state lines; when flying through the overcast, or at altitudes of three to five miles above the terrain it is

[126] Economic parochialism is a problem. Concerning a state's power to tax fleets of mobile chattels moving in interstate commerce *compare* Braniff Airways, Inc. v. Nebraska State Board of Equalization and Assessment, 347 U.S. 590 (1954) *with* Northwest Airlines, Inc. v. Minnesota, 322 U.S. 292 (1944) and see Sutherland and Vinciguerra, *The Octroi and the Airplane*, 32 Cornell L. Q. 161 (1946). For a treatment of the general subject see Sutherland, *The Nation's Economy and State Frontiers*, 8 Stan. L. Rev. 26 (1955).

difficult or impossible to take cognizance of local political boundaries, for with altitude, even though ground contact is maintained, topographical features are often indistinguishable.

In support of our second contention—that communication and transportation have nationalized other functions of government—we must begin with the assertion of an obvious fact yet often overlooked. Communication and transportation are of no vitality in and of themselves—they only serve when they transport, integrate, and disseminate the ideas and substances of our people and our country's vital processes. Hence only those activities, processes and phase of society which cannot be advanced by communications and transportation can escape a trace of nationalism in this little world. A thousand instances could be cited: the nation-wide conference where experts situated all over the country not only converse but see each other yet never leave the comfort of their studies; the speed with which a vaccine is rushed to an area of epidemic; the assistance of the ubiquitous federal police with their vast system of record keeping and advanced scientific methods to bring to the bar of justice thieves who have never bothered to move beyond the shadow of the local police station. What must be overcome is the reluctance of government officials to face the prejudices against upsetting the status quo in making the needed changes which arise through force of circumstances. The great trouble in federalizing functions of government which cry for centralized control is the need to overcome the pressures of those who see in nationalization the loss of influence which they wield in local affairs.

The time limit for appeal of the Cedarhurst case to the Supreme Court has expired but it does not move into the archives of legal record to be forgotten; while it has settled some questions of law it has left a greater social problem unanswered. As the issues narrowed in the Cedarhurst case to the final specific question of whether that portion of airspace used for take-off and landing was navigable airspace, hence susceptible of federalization, the broader issues were lost from sight. The Cedarhurst ordinance was declared invalid but this does not go to the heart of the problem. Here was a community of enraged homeowners attempting to do what they could to keep from their doors this intruder who invaded both day and night. Admittedly fears are often overworked and the discomfort from noise is sometimes masqueraded by the terrors of physical harm. But the intrusion is there nevertheless.

Town officials, civic groups and the people of the communities surrounding the New York airports generally conveyed the feeling of frustration and resignation in their attempt to cope with the problem. Generally the complaint was an unjust taking of property without compensation by both the government and large airline corporations who were profiting by the "seizure" of property. The idea that air commerce is a necessary adjunct to present-day life was not disputed. The property-owner did not want to impede progress; he merely wanted the air carriers to remain within bounds. This could be done

by declaring navigable airspace to be that above 1,000 feet, the present minimum safe altitude of flight; later it should be raised to 5,000 feet. Any invasion below this minimum should constitute a taking for which compensation should be made.

One centralized authority, such as the Administrator of Civil Aeronautics, vested with complete authority over all public airports was recommended. Giving him the power entirely or partially to close down an airport when it became dangerous would avoid the reluctance of the airport operator fearful of destroying his investment. In a situation where the airports are not owned and operated by the city, the municipal authorities are free to take action against the offender without fighting themselves. This is more often true with activities other than municipal airports such as railroads, steel mills, etc. But with the city owning the airport, its neighbors are at some disadvantage in getting any action. The City of New York has far too much invested in La Guardia and Idlewild to abandon them. With the commitments as great as they are, the consensus is that the airports will just have to remain. The inaccessibility of the courts without exorbitant costs is another complaint. The small communities or individual home owners are not able to cope with the great array of legal talent representing the airlines, the government, and the Port Authority. In general the grass roots feeling of the multitude of neighbors of the large New York airports is that an injustice is being done but that a preponderance of wealth, influence and vested interests impedes vindication.

A study of so vexing a problem cannot leave one barren of ideas. The suggestions below favor centralized control since it is firmly believed that the benefits growing out of uniformity can be enjoyed without sacrificing those individual rights to which, sometimes more firmly than others, our nation has always been dedicated.

1. Congress, through regulatory legislation, should assume control of all navigable airspace, regarding it as part of the public domain—an area owned by our national government and subject to national sovereignty to the complete exclusion of state or local regulation.[127] This navigable airspace should not be rigidly fixed but rather should vary with circumstances and should lie upon the surface dweller's and begin at the plane where that airspace necessary for the surface dweller's use and enjoyment leaves off. In the vicinity of public airports this navigable airspace should also include that necessary to effect safe take-offs and landings. A free right of passage in navigable air should continue to be afforded to all citizens of the United States. The federal government should regulate all flight activities in this area with proper and adequate civil and criminal sanctions to the complete exclusion of

[127] This control could be fortified by the conclusion by the federal government of treaties with foreign nations concerning the public domain of air. By an application of the Missouri v. Holland (252 U.S. 416 (1920)) doctrine the necessity for a reconciliation between state and national policies under the concept of delegated and reserved powers fades since legislative power is divided between the federal government and the states while the treaty power is delegated in toto. See *supra* n. 40.

any state regulation or embodiment by reference. The plane which divides the property owner's airspace from air in the public domain should not be confused with the minimum safe altitudes of flight which are safety measures and which vary with the nature of the aircraft to which they apply. The landowner's needs and not the safety of flight should determine the envelope of air protecting the surface occupants.

2. The "envelope of air" doctrine should apply to the ownership of airspace by the subjacent landowner. This doctrine should be adopted by state legislatures and applied by the courts. In the resolution of legal controversies, the "then existing use" yardstick should apply to determine actions affecting present rights such as nuisance or trespass; the "probable future use" doctrine should apply to determine the extent of a taking. The size of the envelope of air should, through experience be allowed to jell into a fixed areal dimension of definite depth providing a sufficient buffer over whatever is reasonably constructed on the land generally to ward off dangerous intrusions depending upon the nature of the use or *probable* use of the property. Annoyances to the landowner beyond this envelope of air should be actionable as a nuisance or as a partial taking of the surface property through interference with the enjoyment and use. Flight barrier penetration causing damage or injury on the surface should be regarded as a physical intrusion upon the surface property.

3. Legislation should be enacted or the present legislation should be strengthened and public funds provided to facilitate the federal ownership of at least major public airports and to enable the federal licensing of all airports.[128] This will add the last segment in a now almost completely rounded area of federal control of the civil air transportation function.

4. The Congress should clarify the federal government's power and funds should be provided to enable it to acquire land for airports and runway over-run areas and for air easements and to regulate the height of present and future structures through eminent domain and zoning regardless of whether or not the airports which these areas are intended to serve are federally owned or operated.

5. Whenever the navigable airspace or other airport activities conflict with the envelope of air of the landowner and public interest requires that part of it is needed for the public domain of the air, or when the landowner suffers from activities outside his envelope of air, full and adequate compensation should be made for the harm or taking. This should apply to zoning as well, where a property owner should not only be compensated for the removal or alteration of structures but even when no alteration or removal is necessary should be compensated by the application of the probable future use yardstick when he suffers a substantial reduction in the value of his property through the imposition of the zoning regulations. Means should be provided to

[128] What powers exist in this area under present legislation? See Seago and Armour, *Federal Licensing of Airports*, 22 Journ. Air L. & Com. 51 (1955).

permit the easy adjudication of any claims for damages for a trespass or nuisance or for a taking from whatever source without undue delay and exorbitant expense by the landowner. When property for an air easement is taken by eminent domain the condemnee should be afforded the right in a single suit to adequate compensation not only for the taking but the diminution in value of the remainder as well. Furthermore, actions for depreciation in value incident to the lower level of flights of aircraft over the premises should be guaranteed. The fairest way here may be to delay the initiation of this action until occurrence of the diminution, since such diminution will vary with the changing nature and volume of the aircraft in use over the land.

6. The federal jurisdiction should be extended to cover all crimes committed in the navigable air above the United States. State activities in this area should be strictly limited to the apprehension, during hot pursuit, of criminals whose criminal acts were committed on the surface in the local jurisdiction and who have fled into the navigable air. Federal authorities should police this public domain of the air.

7. All airspace below the navigable air should remain under the jurisdiction of the government of the subjacent land and waters. Hence the area of control of the local jurisdiction will be coterminous with the landowner's envelope of air and air in the public domain over which the federal government will exercise complete sovereignty will be coterminous with the navigable air.

These suggestions provide only the bare bones of a new structure, the building of which will be fraught with many complications. Yet if the goals which they suggest are realized, a great step forward will be made by:

1. Rededicating the control of air transportation to the promotion of air safety by bringing uniformity of regulations and sanctions in air commerce and eliminating the laws of a patch-work quilt of jurisdictions which could enfeeble air commerce and make the navigation of aircraft difficult if not impossible.

2. Eliminating inconsistencies which now exist in sanctions decreed by overlapping jurisdictions against violations of uniform rules or the promulgation of separate rules either of which destroys the universality which mature experience in aviation recognizes as an imperative of safety, and offends a sense of justice.

3. Eliminating the possibility of a jurisdiction adopting air commerce regulations which it does not understand and would not adopt if the entire import of these rules were fully comprehended.

4. Eliminating the difficulty of determining jurisdiction in the prosecution of crimes in the high air and yet reserving for local jurisdiction sufficient superjacent air properly to fulfill its function of safeguarding the health, safety, morals, welfare and property of its people.

5. Providing the most equitable landowner-airman balance of interests by raising air safety to its highest purpose by upholding the dignity and peace of the home through safeguards against its invasion while yet preserving the airman's right to fly.

How will these aims of safety, uniformity, dignity and justice in the advancement of air commerce be fulfilled? Although air is our medium, the boon which its safe regulation and peaceful use for the public welfare will bring will not drop from it as a windfall here as when the landlocked city by the magic of human flight suddenly found itself beneath a greater ocean. Twice in an era is too often for such blessings haphazardly to fall upon the same beneficiary. Vision is needed, but more—a sincere, generous and cooperative effort, this time purposefully to attain the conclusion to Tennyson's dream of the age of flight—a Parliament of man guiding a Federation of the World, where

> . . . the common sense of most shall hold a fretful realm in awe,
> And the kindly earth shall slumber, lapt in universal law.[129]

[129] Tennyson, *op. cit. supra* n. 1.

THE ROLE OF AIR TRANSPORT IN EUROPEAN INTEGRATION

By D. Goedhuis

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WHEN Bertrand Russell, who was Professor of Philosophy at Cambridge in the early days of this century, was asked by one of his students named Wittgenstein whether he ought to consider himself "a complete idiot or not," Bertrand Russell answered: "My dear fellow I don't know; why are you asking me?" Wittgenstein replied: "Because, if I am a complete idiot, I shall become an aeronaut, but if not, I shall become a philosopher." Bertrand Russell concluded that Wittgenstein was not a complete idiot, and the student therefore decided to follow in his master's footsteps.

We have long left behind the Icarian period of aviation in which this conversation took place and, perhaps partly through eccentricity though not through idiocy, but primarily through their imaginative boldness and willingness to take risks, the aeronauts—whose intellectual capacities were apparently not rated very high by Wittgenstein –have changed the face of the world.

Now, the unfortunate thing is that mankind has concentrated its imagination, boldness and willingness to take risks on the development of the instrument of flight, but that with regard to the *use* to be made of this instrument, these qualities have been sadly lacking. Thinking about the ends to be served by the aeroplane has constantly been vitiated by vague fears, by a lack of insight into the practically unlimited possibilities offered through the newest and fastest means of transport.

From the manner in which the problem of European aviation integration is being approached, it will be seen how greatly these vague fears have influenced and are influencing the minds of those who are trying to find a solution.

Let us go back for a moment to the beginning of civil aviation immediately after the First World War. In that period air carriers in several European countries started operations as a private enterprise, relying on their own financial resources. At that time the prevalent idea was that expressed by Winston Churchill in 1920: "Civil aviation should fly by itself. Governments cannot hold it up in the air." This

[1] As the author holds an official position, it should be noted that the views expressed in this article are his personal views. Their expression does not in any way imply the concurrence of the Netherlands Government.

seemed completely obvious to Churchill with his unshakable belief in the value of personal initiative and ingenuity.

However, not long after this statement was made, the British aviation companies had to suspend operations for lack of finance. In England, as in other European countries, the government decided on financial aid to its airlines, but this aid was meant as a temporary measure, as a support needed in the early stages of development. Gradually, though, this idea of helping a new industry on a temporary basis was replaced by the thought that the continued existence of a flagline was nationally necessary, irrespective of its ability to pay its way and to be self-supporting. In several countries this new view resulted in the complete nationalization of the airline by the State; and, though it may be true that there are at the moment a number of European airlines—K.L.M., Swissair, Sabena and S.A.S., for instance —which are partly capitalized by private investors, in most cases the amounts are small in relation to the total commitments, loans and other capital provisions borne or guaranteed by government.

Why was it that aviation came more and more to be considered as an instrument of national policy; why was it that extra-economic or even anti-economic considerations came more and more to control and to shape the course of aviation? I shall not try to analyze all the factors which have led up to this situation, but I should like to draw attention to a few important points.

Apart from its economic and social aspects, aviation presents a political and strategic aspect. This means that aviation relations cannot be considered independently of general international relations. One of the most marked developments in the period between the two world wars was the steady growth of economic nationalism. The increasing economic disintegration of the world was caused by three factors: the economic consequences of the First World War, the economic crisis of 1929, and the threat of a new war. The narrow nationalistic trends which became more and more apparent, particularly after 1929, in the *general* economic and political field were reflected in international aviation. The social factor in aviation vanished from the stage and the element of power was left in sole control of the scene. Rational appreciation of the value of aviation as a stimulator towards higher levels of economic activity in the world became lost.

For a short while after the Second World War it seemed as if the world had gained a better insight into the unlimited possibilities of aviation and the importance of its free development. The total disorganization of means of surface and sea communication left more room for private initiative in aviation. But it was not long before narrow nationalism gained ground again.

The constantly growing part the State played in aviation caused national barriers to rise sharply, and the idea of an "international common interest" to weaken. Common interest is by its very nature

a concept that does not come quite within the material sphere; the mental climate in which aviation had developed in the first post-war years had changed fundamentally.

How did European aviation fare under this system in which the State played a decisive part? Let me mention some figures.

Europe, with a population of 300 million, generates only about one fifth of the volume of air transport generated on the domestic network of the U.S.A. Of all transport in Europe, air transport comprises only approximately 15 per cent. In 1950 the European airlines carried 17.9 per cent of the total world air traffic and in 1955 only 18.1 per cent—an increase in participation of only 0.2 per cent. Whereas North America counted for 64.1 per cent of total world air traffic in 1950 and 67.3 per cent in 1955, an increase of 3.2 per cent.

A recent publication, "Airline Finance Record,"[2] giving statistics on financial results of major European airlines during the period from 1950 to 1955, demonstrates how unsatisfactory these results are. It has to be taken into account, though, that the financial situation of the entire international aviation industry is far from flourishing. As the Director-General of the International Air Transport Association, Sir William Hildred, remarked recently, the economic balance of this industry is that of a man standing on one leg; and, as far as this comparison goes, this one leg must, where Europe is concerned, be considered very weak indeed.

Now there are two questions which require an answer: (1) What are the general reasons for international aviation being in such an unfavorable economic position, and (2) are there, in the case of Europe, any additional *particular* causes to make economic operations more difficult?

In connection with the first question, I have already mentioned the excessive state influence with regard to aviation and its growth on military grounds and for reasons of prestige. The proclamation of the concept of "complete and exclusive sovereignty over the airspace" of the underlying State in the Paris Convention of 1919, and later in the Chicago Convention of 1944, was treated by the States as a permit to subject foreign aviation to the most sweeping restrictions.

Economic operation of a trunk route is impossible without fifth freedom rights, and in a considerable number of the more than 400 bilateral aviation agreements, so far concluded between the States, these rights are either not granted, or granted to so limited an extent, that a healthy growth of traffic is impossible.

If we take into account that aircraft speed has increased tenfold in half a century, it is not surprising that airlines have found, and find it particularly difficult to keep pace with this technical evolution where profitable economics are concerned. Technical development is greatly stimulated by military considerations. Competitive reasons—

[2] Aviation Studies London.

in which latent assets for defense purposes also play a part in certain cases—force the airlines to follow suit, and this implies early writings-off and, therefore, high costs. In the second half of this century a further increase of aircraft speed is to be expected, and according to Peter Masefield, Director of Bristol's, this will not be less spectacular than the tenfold speed increase of the first half of this century.[3]

With regard to the question whether there are particular reasons why European aviation has to face even more severe financial difficulties than that of other parts of the world, aviation experts have given different answers. Secretary-General Lemoine, of Air France, expressed the view in a recent article[4] that distances between European traffic centers are not sufficiently great for economic operation, and that United States opinion is to the effect that air traffic is not profitable under 500 kilometers. *Wheatcroft,* in his book "The Economics of European Air Transport"[5] on the other hand, says that it is the low intensity rather than the short haul nature of European airlines operations that causes the main economic problem.

It may be assumed, however, that unless conditions prevail which are highly in favor of air transport, such as a journey involving a sea-crossing, it is far from an easy task to render services with a range of less than 500 kilometers profitable. Factors which add to the difficulty of avoiding loss in short-haul traffic are, for instance:

a. A short range means a relatively large number of landings and, therefore, a higher operation-expenditure per ton-kilometer; relatively small usage of aircraft and crew, relatively high take-off and landing costs, and high proportional cost of service to passengers.

b. Establishment expenses, too, are high in proportion to revenue. A great deal of this expenditure is unrelated to the length of the journey.

c. The adaptation of fare tariffs in view of this high establishment expenditure is difficult on short-range travel, owing to the relatively little gain in time which this kind of air travel can claim.

d. The inconsiderable gain in time compels short-range air traffic to offer more frequent services and, therefore, to make use of smaller aircraft, which render its ton-kilometer production dearer than that of long-range air traffic.

Everybody agrees that the lack of any logical pattern in Europe's air services has detrimental effects. As it is easier to obtain third and fourth than fifth freedom rights, a radiation system is being applied,

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[3] Masefield bases this prediction amongst others on the following consideration: "No seat yet made remains comfortable to the human posterior for more than about 3 hours at a stretch. The simple and logical requirement then is that any terrestrial destination should be reached within the comfortable sitting time."

[4] L'idée européenne dans l'aviation de transport et l'accord multilatéral sur les droits commerciaux pour les transports aériens non-réguliers en Europe (Revue Française de Droit Aérien 1957 no. 1 p. 1 et seq.).

[5] Manchester University Press 1956. (Reviewed in Journal of Air Law and Commerce, Winter, 1957.)

which leads to constant overlapping of services. The general lack of coordination affects costs unfavorably.

Another important factor is that the primary purpose of many European services is to act as "feeder service" for long-distance services. Regional services are thus withheld from their function of satisfying regional needs.

In addition to this, it is obvious that the existence of a great number of separate countries, all with their own customs, immigration and other controls, increases the costs of operation. Traffic demand is highly seasonal and is also subject to fierce competition by a well developed net of ground communications.

Looking at this far from encouraging picture of European air transport, it is not surprising that when the plans toward a general European integration were taking shape, and the question was being considered what function air transport could exercise in promoting European unity, the idea of such integration was seized upon in many circles as the solution "par excellence" of all the ills of European air transport. Moreover, as the efforts toward finding a solution to the aviation problem on a world-wide basis had failed, would this problem not have more chance of being solved by dealing with it on a regional basis?

It was in 1951 that several plans for a European aviation integration were discussed at Strasbourg in the Council of Europe.

The most revolutionary proposal was that made by the Italian Foreign Minister, *Count Sforza,* who suggested the creation of a common European air space. The creation of this space was intended to allow all traffic between member States to be considered cabotage traffic. A Control Authority would be set up, the role of each State being fixed according to three criteria: population, surface area, and geographical situation. Another plan was submitted by the Frenchman *Bonnefous* on behalf of the "Committee on Transport" of the Consultative Assembly. This plan aimed at the creation of a single European air company, as did a third plan submitted by the "Committee on Economic Questions." This last proposal was to the effect that, as the airlines frequently depended for their existence on their governments and could not survive without their financial support, only the governments were in a position to undertake the establishment of this single European company.

When the directors of the European airlines read this proposition, they must have felt rather like the members of the States-General of Holland as, after a rather unfortunate war with France, they were told by one of the French emissaries before the start of the Peace Conference of 1712 that: "on traitera de la paix chez vous, pour vous, sans vous." The air companies realized that the best way to avoid their future European status being determined by the governments "for them and without them" was to get together and examine the possibilities of arriving themselves at a concerted action regarding the coordination

of European air transport. An Air Research Bureau was established under the direction of the Belgian economist *Professor de Groote,* and since its inception this Bureau has produced some important studies about which I shall say something later.

But let me first come back to the proposals made in the Council of Europe. This idea of having international aviation operated by a single company was not a new one. Once or twice, within the last 25 years, plans of a similar nature, but on a world-wide scale, had been put forward. At the Geneva Disarmament Conference in 1932, the Frenchman *Tardieu* made a proposal for the creation of an "Aéronautique Civile Internationale de Transport" under the auspices of the League of Nations. In a pamphlet, "Wings for Peace," published in the spring of 1944, the British Labor Party set forth as the essential object to be realized the creation of a World Air Authority to own and operate international air services. At the Chicago Conference in 1944, Australia and New Zealand proposed that international aviation should be administered by a single international corporation in which each State should participate. Both conferences, while greatly appreciating the high-mindedness which the delegates felt lay behind these plans, considered that they would not be feasible in practice. But, one may ask, if not on a world-wide scale, would an international company on a regional scale not offer a solution?

I believe that this question has to be answered in the negative. The establishment of a single European company is undesirable, and even if it were not undesirable it would be unattainable. It would be undesirable because such a company would curb initiative, would leave insufficient scope for creative impulses, and would therefore not serve the needs of the public in the best manner. It would lead to an increase in the already far too powerful influence of political considerations in aviation, whereas it is essential to try to limit the influence of these factors.

That plans of such a nature would be unattainable becomes clear when one studies the suggestion made by *Count Sforza* as regards the criteria to be applied in determining the role of each State in such a single company. The Sforza Plan, as I have already pointed out, cited as criteria: population, surface area, and geographical situation. What about technical skill, economic strength, international relations, tradition, pioneering ability? Would all these factors be ignored in allotting the share which the various nations would be allowed to have in this company?

The reactions to the above proposals made it clear to the Council of Europe that they were on the wrong track and that a better way of approach would be to study methods of improving commercial and technical cooperation between the European airlines, and to study the possibilities of limiting the restrictions on the granting of commercial rights.

Another matter debated by the Council was whether the Conference to discuss these problems should be held under the aegis of the Council itself or whether it would be better to ask the I.C.A.O. to convene the Conference. Preference was given to the latter course of action and, in my opinion, rightly. The implications of global air transport should never be lost sight of. Tendencies in the world toward dealing with aviation problems on an *exclusively* regional basis should be combated. Regional problems should never be discussed apart from the world problems of aviation, and regionalism should never lead to the formation of blocks of closed sky.

In April 1954, a conference, convened by ICAO, was held in Strasbourg, which had the benefit of an extensive report on European air transport, prepared by the Air Research Bureau; and on the basis of the statistical data at its disposal, it reached the conclusion that solutions based on coordination between the airlines would be preferable to those imposed by governments.

When the question of the reduction of costs was discussed at the Conference, the delegates were able, without any contentious debate, to make a series of recommendations. But when the most important question of all, that of liberalizing the grant of traffic rights, came up for discussion, the conference ran into the kind of difficulties which by now have become almost traditional. The two schools of thought, the one advocating complete freedom, the other wanting maximum protection, clashed. It soon became clear that any chances of arriving at some form of multilateral agreement on the exchange of rights for *scheduled* services were simply non-existent.

The conference was able, however, to secure a measure of agreement on the subject of granting greater freedom to the operation of services confined to the carriage of *freight* traffic. A recommendation was accepted that freedom distinctions should not be applied to scheduled freight services in Europe, and that States should consider favorably applications made to them for indirect routings required for the operation of such freight services.

Another step in the right direction was taken by the recommendation of the conference that *non-scheduled* intra-European services which did not prejudice the interests of scheduled services should be freely allowed, and that a multilateral agreement should be concluded to ensure the greatest possible freedom for that kind of flights. At the first European Civil Aviation Conference, held at Strasbourg in November 1955, this recommendation was followed up and agreement was reached on a draft multilateral agreement on commercial rights of non-scheduled services. By this agreement a rather modest easing[6] and standardization of the existing regulations has been achieved.

What are the results which up till now have been attained by these two recommendations?

[6] For a criticism of the requirement of prior permission for such flights see Wassenbergh, Post-War International Civil Aviation Policy and the Law of the Air, The Hague, 1957, p. 95.

As regards the one on the liberalization of freight traffic, so far only eight countries—among them England and the Netherlands—have informed ICAO of their intention to implement this liberalization. Two countries—France and Greece—have made it known that they are not able to apply the recommendation. The other nine countries which took part in the work of the European Conference have not yet announced their points of view. This means that any truly worthwhile result in European air freight transport is as yet far from realized.

The multilateral agreement on non-scheduled services had a slightly better result. At present sixteen countries—including the Netherlands, France, West Germany, but not England—have signed the agreement. Switzerland, Austria, and Spain are up till now the only countries which have ratified it.

The question of a multilateral agreement on *scheduled* services in Europe was once more discussed at the Second European Civil Aviation Conference, at Madrid in April/May 1957. But this conference, too, was under no illusion that such an agreement would be reached. A recommendation was, however, accepted that States should follow a liberal policy in general in the granting of traffic rights, and, with this objective, should adopt a liberal attitude towards direct intra-European services (*i.e.*, services without commercial stops in the territories of third States); that they should facilitate the establishment and operation of other intra-European air services of member States unless it is considered that these services unduly affect national carriers or do not serve the interests of the users; and that they should give favorable consideration to cooperative arrangements between airlines. A closer look at this recommendation shows that, as far as the granting of fifth freedom rights is concerned, it does nothing to change the States' highly guarded attitude. If they do not wish to grant these rights they can always base their refusal on the claim that they would "unduly affect" the national carriers. And as it is precisely in respect of the fifth freedom rights that liberalization is most needed, the question arises whether this means that the whole recommendation is of no value at all. The answer is that, notwithstanding the fact that it has no juridical value, it is of a certain ideological importance.

If we look at European air transport as a whole, it is difficult to come to a conclusion other than that very little progress has been made in regard to its economic structure since the Council of Europe in 1951 took up the matter of integration. And it does not seem very likely that more substantial progress will be made in the foreseeable future. The will to achieve a greater European aviation integration is weak because there is as yet no general understanding of its necessity. In this, to use the words spoken by Benjamin Franklin at the signing of the American Declaration of Independence, it is not yet realized that "We must all hang together, or assuredly we shall all hang separately."

But, though it is difficult to be optimistic about the near future,

there are forces at work in Europe which cannot be stopped and which will increasingly influence the approach to the European aviation problem. Unconquerable as they must be in the long run, their effects could be accelerated by direction into certain channels, and to this subject I should like to give some further consideration.

The first question is whether the establishment of a European authority under the aegis of a European Civil Aviation Conference would be feasible.

In the March issue of *Interavia* the Chairman of Air France, M. Hymans, reverts in an article entitled "European Air Transport Is Indivisible" to the idea of the creation of an Air Transport Authority which would be responsible for the distribution of operating rights inside Europe. This authority, he explains, would bear a strong resemblance to the United States Civil Aeronautics Board.

This comparison would hold good only if the Authority's allocation of operating rights were to be governed by standards of efficiency and economy in operation, based on the interests of the customer. These, indeed, are the standards applied by the CAB to the internal network of the United States. CAB has not got to wrestle with the problem of economic nationalism. If the "Air Transport Authority" could base its policy on truly economic values, there would be much to be said for an institution of this kind, but such a basis presupposes a complete change in the attitude of many European States toward the aviation problem, and, I am afraid, it would amount to a complete illusion to expect such a change in a foreseeable future.

Another plan, that of Mr. Wheatcroft, economic adviser to B.E.A., which does not go quite as far as M. Hymans', also deserves attention. Mr. Wheatcroft proposes the creation of an Air Transport Commission of a very different character from the Authority proposed by Mr. Hymans. The Wheatcroft commission is not intended to be a full-fledged licensing authority but an *advisory* body, because Mr. Wheatcroft believes, rightly, that the European States—it would be better, perhaps, to say the majority of them—are not yet willing to leave the decision regarding air routes to be operated to and through their territories to an international body.

Examination of the proposals of Mr. Hymans and Mr. Wheatcroft reveals three fundamental questions for which they fail to allow.

a. What will be the position of the various States in the authority to be created? Will their factual inequality be taken into account and on what basis will this be shown—political inequality, inequality in economic power, inequality in aviation know-how?

b. How will resolutions be arrived at? Will they be made on the basis of unanimity or a majority of votes? In considering this point, certain words of Lord Granville come to mind. When, in 1881, the question arose whether the British Cabinet should use the vote, he declared: "I never knew numbers counted in the Cabinet and I think

it is absurd to count heads in assemblies in which there is such a difference in the contents of the heads."[7]

c. Finally, the third question: What would be the authority's powers—on what basis would it allot European routes and services or advise thereon?

The answer to this question must take into account the fundamental differences of opinion between States wishing to be guided by considerations of a purely economic nature and favoring a liberalization approach, and those wishing primarily to take into consideration political criteria and favoring a planning approach that puts the accent on measures of protectionism.

Within the first category come in the first place the Netherlands, the Scandinavian countries, Finland, Iceland, Luxembourg, and Turkey. Belgium is more difficult to place, though she, too, appreciates the value of more freedom in European air traffic. Belgium does not as yet, however, belong to the countries which favor greater freedom of air traffic *in all its consequences,* since she still strongly protects her highly profitable Congo route.

The United Kingdom is to a certain extent in the same position as Belgium. The British delegate's attitude at the recent European Civil Aviation Conference in Madrid gave evidence of England's increasing inclination to join, as far as Europe is concerned, the States that wish to eliminate artificial barriers and to attain greater efficiency through better division of labor and competition. It would not be surprising, though, if there were some truth in the supposition that there is some connection between this growing inclination towards liberalization in Europe and the powerful competitive position of B.E.A., owing to its introduction of the Viscount aircraft. The same inclination towards liberalization is not noticeable on a wider basis; B.O.A.C. still insists on protection by the British Government on its long distance routes. As a result, British aviation policy is contradictory—working for freedom in the matter of European routes, aiming at restrictions in the matter of intercontinental routes. It is not to be expected that this contradiction will prove permanent. The introduction of new aircraft such as the Britannia is likely to lead to a better understanding of the realities of the situation; and anything which helps towards the growth of the total market, or accelerates its rate of growth, is far more likely to improve the results of individual airlines than protection by artificial devices.

Western Germany, which has undertaken a crusade in favor of more general free trade under the guidance of Minister Erhard, has not, so far, decided upon a settled point of view in respect of aviation relations. The reason is that her participation in air transport is as

[7] Cited by Tammes, Hoofdstukken van Internationale Organisatie, Nijhoff, 1951.

yet of short duration, so that she is still unsure of the effects a really liberal policy will have on the growth of German aviation.

As for France, it is clear from a Report of the Conseil Economique published in March 1957 that she still believes firmly in extensive planning and a political approach to the European aviation problem.[8] The aviation policies of the governments of Spain, Portugal, Italy and Greece move in the same direction and are strongly influenced by protectionist ideas.

Though there are a number of variations in the aviation policies of practically all the European States, these policies can be divided into two *main* categories.

a. The first category, which applies mainly to the northern European States, is based on the principle of regarding aviation as a normal commercial enterprise.

b. The second category, which applies mainly to the southern European countries, is based on the idea of a directed protectionist solution of the European aviation problem.

For the time being this gap is there and, in estimating the possibilities of a closer aviation community, it must be accepted as an inescapable fact if the present situation is to be judged realistically.

To recall the guiding principles of the Common Market and the European Free Trade Area, both these groups accept the idea that a country which has shown a special capacity for a given activity should be allotted a share in the European economy proportionate to that capacity, recognizing that maximum development of economic strength in Europe can be reached only by arranging *for* and not *against* competition.

This is the same idea as that underlying the policy of the countries belonging to the first of our two categories. And if it is also borne in mind that aviation is a factor of ever increasing importance for the achievement of a continental economic policy, and that therefore the stimulation of a greater aviation community is a logical and necessary consequence of the plans for European integration, only one conclusion can be reached.

Since, on the one hand, it will be impossible for the time being to achieve European aviation integration, but a number of States, on the other hand, follow an aviation policy guided by the basic principles of this form of community, it is up to these countries to try to arrive at an arrangement inspired by liberal conceptions. Such a "sector approach" should, of course, not be an end in itself but an encouragement towards further integration. There can be little doubt that the indirect consequences of a liberalization approach of this nature will

[8] The Conseil Economique in its Report of 24 March 1957 states for instance: "Une véritable coopération sur le plan européen ne peut être obtenue sans l'action constante des gouvernements eux-mêmes et doit se concevoir en fonction de la position déjà acquise par la France dans la compétition internationale et des possibilités d'expansion qu'elle prèsente par son passè aéronautique, le haut niveau de sa technique, sa position géographique et ses possibilitiés touristiques."

be of major importance not only for European, but also for world, aviation.

A method for cooperation in this sense will have to be found by statesmen and aviation experts in close collaboration. In addition to this task, for the achievement of which the governments will in first and last instance be responsible, there remains an important one for the airlines themselves. In the next few years, as a result of the introduction of jet aircraft on scheduled services, the necessity for closer cooperation will become increasingly urgent. At the moment the revolutionary changes arising out of the use of jet aircraft are being studied by the airlines separately. One question to which no easy answer is possible is: what effect will the introduction of jet aircraft have on European fifth freedom traffic? The use of these aircraft on intercontinental services will result in fewer intermediary landings in Europe, whereas at certain European points a new taking-on and discharging function will be created. Part of the intra-European traffic which uses intercontinental services at present will have to be taken over by regional services. This will probably lead to an increase in the value of fifth freedom traffic but nobody can as yet assess the consequences with any degree of certainty. What is certain, however, is that the introduction of jet aircraft will render European cooperation even more imperative. For this reason a joint study of the operating problems will become a matter of vital importance as soon as the airlines have arrived at a considered opinion on the use of these aircraft.

Before concluding this article I should like to add one or two observations on the future development of international aviation in general. I have pointed out that increasing "étatisme" in aviation has imbued the State with too much power and that this state-influence has reached a point where it is no longer constructive. This extreme "étatisme" has hindered aviation in its normal growth because it hampers the free play of economic laws. In the last few years, however, a few States have asked themselves if their true national interests would not be better served by decreasing the State's participation in the national airlines. An example of this tendency can be seen in the Netherlands Government's decision to allow K.L.M. to buy back 15 million guildersworth of shares which were in the government's hands. Ever since 1929 the Netherlands Government has been K.L.M.'s biggest shareholder, as such, and also through certain powers vested in the Board of Directors under a subsidy agreement concluded in 1927, it has exerted considerable influence. In 1956 the K.L.M. articles of association were amended and its administration was changed into that of a normal limited company. The State remains the biggest shareholder, but it now has only the same rights as normal equity holders.

I have also called attention to the factors responsible for civil aviation coming to be increasingly looked upon between the two world wars as an instrument of military and political power. But if we bear in mind what revolutionary changes have occurred in the means of

warfare in the last few years, it will become evident to us that the relative value of civil aviation in military matters has been considerably reduced.

The kind of development which can be noted in the history of all forms of international transport is now perceptible also in aviation: as communications expand, political traffic requirements give way to economic needs. Purely political considerations fade into the background at the same rate at which traffic expands.

Europe was the cradle of international aviation, and it is now offered the chance of becoming the cradle of an order of law, limiting the arbitrary and irresponsible exercise of power to obstruct the air communications which form such an essential element in the promotion of European unity. What we need is the boldness and the willingness to take risks which was displayed by the aeronauts in the beginning of this century.

SPACE LAW AND METALAW—JURISDICTION DEFINED*

By Andrew G. Haley

General Counsel of the American Rocket Society, Chairman of the International Affairs Committee of the International Astronautical Federation.

IN his excellent review of the papers delivered at the 7th Annual Congress of the International Astronautical Federation in Rome, Italy, September 17-22, 1956, Slater[1] remarked with respect to my paper, *Space Law and Metalaw—A Synoptic View,* that I was deficient with regard to definitions. Having wholesome respect for Slater's power of anaylsis and criticism, I reread my paper with the thought that I might perform a useful task in clarifying the meaning of the terms I had used therein.

My reassessment of the Rome paper satisfied me that I had adequately defined anthropocentric law as being simply the law of human beings, and in this connection the term "law" is frequently employed as referring to a science of principles; and, specifically, a science or system of principles or rules of human conduct; "a system of rules and principles, in which the rights of parties are protected and enforced; a system of rules conformable to the standards of justice and on an enlarged view of the relations of persons and things as they practically exist; a mass of principles classified, reduced to order, and put in the shape of rules, agreed on by ascertaining the common consent of mankind; rules of civil conduct for the common good; rules promulgated by government as a means to an ordered society; the enforcement of justice among men." It is also said that the very definition of law is *sancto sancti jubens honesta et prohibens contraria.*

I also believe that terrestrial law, international law, natural law, and similar concepts of law have been discussed adequately.[2]

A meticulous review of the writings of experts in the field, as well as my own papers on the subject, left me with the belief that is it most

* Presented at the American Rocket Society Spring Meeting, Sheraton Park Hotel, Washington, D.C., April 3-6, 1957.

[1] A. E. Slater, *Technical Sessions at the Rome Congress,* 16 Journal of the British Interplanetary Society 22, at 41 (Jan.-Mar. 1957).

[2] The author of this paper has made the following contributions on the subject:

"International Cooperation in Rocketry and Astronautics." Published in *Jet Proplusion,* The Journal of the American Rocket Society, Volume 25, Issue No. 11, November 1955.

"Basic Concepts of Space Law." Presented at the American Rocket Society 25th Anniversary Annual Meeting, Chicago, Illinois, November 14-18, 1955; Published in *Jet Propulsion,* Volume 26, Issue No. 11, November 1956.

"Space Law—Basic Concepts." Presented at the 75th Annual Convention of The Bar Association of Tennessee, Nashville, Tennessee, June 14-16, 1956; Published in Tennessee Law Review, Volume 24, Issue No. 4, June 1956.

"Space Law and Metalaw—A Synoptic View." Presented at the 7th Annual Congress of the International Astronautical Federation, Rome, Italy, September

desirable to state as finally as possible a scientific definition of the precise area where the jurisdiction of terrestrial law ends and the jurisdiction of space laws begins.

To arrive at such a determination, it is desirable, and indeed necessary, to review the opinions of the authorities on the subject, and then come to some basic conclusions.

Because of the failure of publicists to furnish the Library of Congress with their writings — and the consequent lack of the indexing thereof in the United States — I undoubtedly have not consulted the writings of all the authorities who have dealt with space law. In the following brief review I have confined my observations to the works of John Cobb Cooper, Professor of Law and formerly Director of the Institute of International Air Law, McGill University, Montreal, and member, Advisory Council Woodrow Wilson School of Public and International Affairs of Princeton University. In my opinion, Dr. Cooper is one of the most competent world authorities and he is undoubtedly the Dean of American air law experts. Dr. Welf Heinrich Prince of Hanover has the unique distinction of being the first formal student of space law. As a graduate student at Goettingen, he had the imagination and courage to choose as his doctoral dissertation, "Air Law and Space," and his work has already earned the standing of a basic classic in the field of space law. Dr. Alex Meyer, of the University of Cologne, one of the world's foremost authorities on air law, read the first paper in Europe on space law at Stuttgart during the Third Congress of the International Astronautical Federation in September, 1952. Mr. C. Wilfred Jenks, of the International Labor Office in Geneva, has contributed one of the truly great discussions on the problems of space travel and space law and I have borrowed heavily from his article in my resume. Mr. Oscar Schachter, Director of the General Legal Division of the United Nations, has made several contributions in the field of space law, each of which is characterized by great clarity. Mr. P. K. Roy, Director of the Legal Bureau of the International Civil Aviation Organization (ICAO), whom we are privileged to have with us at this meeting, has shown acute awareness of the evolving problems concerned with space navigation and has kept ICAO alerted to these problems which has resulted in the recognition thereof at the Caracas Conference and on other occasions. I earnestly recommend that all students of the subject read Mr. Roy's paper read this morning, "Some Current Considerations Affecting the Evolution of Space

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19, 1956; Published in the Harvard University Law Record, Volume 23, Issue No. 6, November 1, 1956.

"The Present Day Developments in Space Law and the Beginnings of Metalaw." Presented at the American Rocket Society 11th Annual Meeting, New York, N. Y., November 26-29, 1956; Published in Harvard University Law Record, Volume 24, Issue No. 2, February 7, 1957.

"Seventh IAF Congress Stresses Cooperation." Published in *Jet Propulsion*, Volume 27, Issue No. 1, January 1957.

"Weltraumrecht und Recht auherhalb der Erde, Eine Ubersicht." Carl Heymanns Verlag KG, Berlin Charlottenburg 2, Gutenbergstrasse 3.

Law." Dr. Ming-Min Peng, a Formosan scholar, has contributed thoughtful observations in the field.

"Certain jurists have insisted that the territory of a state is limited by the ability of that state to make its laws effective." Professor Cooper wrote in 1951, and he continued, "This is a harsh rule when applied to sovereignty in space. The richest and most powerful states now have means through high altitude rockets to control more or less effectively the 'airspace' over their surface territories. But the weaker states have no such power. Can we be said to live in such a world where the physical power at any one time of any particular state determines its *international right* to consider the region above its surface territories as part of its national territory? I may say here that my own belief is and has always been that if the rule of effectiveness is to be applied to determine the limit of state territory in space, then the rule should be that every state, no matter how small or how weak, as a state of equal sovereignty with every other state, has and should be admitted to have territorial rights upwards above its surface territories as high as the rights of every other state, no matter how powerful.

"Perhaps the rule should be, in the absence of international agreement, that the territory of every state extends upward as far into space as it is physically and scientifically possible for any one state to control the regions directly above it. In considering the possibility of adopting such a rule as this as part of international law, its limitation must be understood. The enormous distances must not be forgotten."[3]

These observations of Professor Cooper have been misinterpreted on numerous occasions during the past several years. He continued, in the same article,

". . . I am concerned that we must abandon the theory that the state has the right to claim territory out into space as far as the earth's attraction extends, and that we must admit some such reasonable rules as I have suggested above — namely, that at any particular time the territory of each state extends upward into space as far as the scientific progress of any state in the international community permits such state to control space above it.

"Frankly, this is not put forward as a final solution. It is realized that it leaves open such vital questions as to what extent of control is contemplated, and by what means an international determination will be made of the ability of the most powerful state to extend its control into outer space. In its favor I can only say that it is worthy of consideration; that it provides the basis for a fairly livable world in which the weak state is not at the mercy of the strong.[4]

On April 26, 1956, in an address before the American Society of International Law in Washington, D.C., Professor Cooper summarized his current thinking by proposing a three-zone concept of sovereignty

[3] Cooper, "High Altitude Flight and National Sovereignty," 4 International Law Quarterly, 411, 417-418 (1951).
[4] Idem.

created through an international convention on the subject. He suggests that we:

"Reaffirm Article I of the Chicago Convention, giving the subjacent state full sovereignty in the areas of atmospheric space above it, up to the height where 'aircraft' as now defined, may be operated, such areas to be designated 'territorial' space.

"Extend the sovereignty of the subjacent state upward to 300 miles above the earth's surface, designating this second area as 'contiguous space,' and provide for a right of transit through this zone for all non-military flight instrumentalities when ascending or descending.

"Accept the principle that all space above 'contiguous space' is free for the passage of all instrumentalities."[5]

"I agree fully with Professor Cooper that the only way to solve the question concerning the legal status of the outer space is an international agreement and, in my opinion, the solution can only be to consider the outer space as a free area like the open sea," Dr. Meyer commented on the foregoing views of Professor Cooper. "In my opinion," Dr. Meyer continued, "it seems quite impossible to extend the states' sovereignty into the outer space. Besides the fact that the exercise of such sovereignty in the outer space cannot become effective, it seems impossible to fix an area in the outer space which corresponds to the territory of a state on the earth. The enormous distances between the surface of the earth and the outer space makes it impossible to state whether an event occurring in the outer space has occurred just above a certain state of the earth. Even by establishing fictitious borderlines above the territorial boundaries of a state, it seems impossible to fix an area in the outer space which corresponds exactly to these territorial boundaries.

"On the other hand, I have some doubt whether it would be necessary or even useful to establish a 'contiguous area,' evidently similar to the territorial waters of the earth. The situation of the air and the outer space is quite different from the situation on the earth. Between airspace and outer space no determined shore exists. The air has the particular quality of gradually becoming thinner and thinner. As soon as there is traffic into the outer space, it will of course be necessary to fix the limits between the airspace and the outer space in a certain altitude by an international agreement. At which height these boundaries should be fixed, will be a question to be decided by the experts.

"As concerns the additional questions of Professor Cooper whether ICAO should be authorized to amend its Annexes, so as to expand its definition of 'aircraft' to include instrumentalities which, like rockets and satellites, do not require support from the air, and thereby extend its regulatory jurisdiction to such new flight instrumentalities, I do not think it possible to include rockets and satellites which do not require support from the air within the term 'aircraft.' I think a differ-

[5] Cooper, "Legal Problems of Upper Space," speech before the Annual Meeting of the American Society of International Law, Washington, D.C., April 26, 1956.

ent term must be used for these instrumentalities. Mr. Cooper has already used the name 'spacecraft,' the name 'spaceship' has also been used. On the other hand, it would be possible to extend the regulations of the Convention of Chicago with the necessary amendments to the new flight instrumentalities."[6]

A Formosan scholar, Dr. Ming-Min Peng, takes a contrasting position. He maintains that at least until interplanetary travel becomes a reality, the sovereignty of nations over the space above them should be considered to extend to the limits of all flight. He points out that the operative scope of the Chicago Convention of 1944, which embraced the national sovereignty principle, extends to the outermost part of the atmosphere and he justifies its use despite all practical difficulties on the ground of the immense danger to subjacent states which otherwise must exist.

Dr. Ming-Min Peng argues that nations have always considered themselves supreme in the whole area above their territory and that the sovereignty statements in the Conventions of this century were never considered by the contracting parties to be limitative in nature, but went to the limits of space thought to be usable by man.[7]

Mr. Jenks takes the position that the national sovereignty concept cannot be applied beyond the Earth's atmosphere because the realities of interstellar space make such a concept "a meaningless and dangerous abstraction." He argues that space beyond the Earth's atmosphere is analogous to the high seas and is and must remain incapable of appropriation by the projection into it of any particular sovereignty based on a fraction of the Earth's surface. He cites the satellite launching plan as an example of the acceptance of his thesis on state practice.[8]

Jenks states:

". . . that the present law relating to sovereignty over air space . . . may be regarded by future generations much as we regard the claims to maritime sovereignty which were more or less successfully asserted for several hundreds of years before Grotius and Bynkershoek established the principle of the freedom of the seas. Space beyond the atmosphere of the earth presents a much closer analogy to the high seas than to the air space above the territory of a state. One could, theoretically, conceive of the atmosphere, the ionosphere, the zone used by earth satellites and interplanetary and interstellar space beyond as a series of zones subject to differing legal regimes. There would, however, be serious difficulty in defining the boundaries of the successive zones. Even if this difficulty were overcome and such an approach to the problem were to be adopted the projection of the

[6] Meyer, Comments on the address of Professor Cooper, "Legal Problems of Upper Space," delivered before the Annual Meeting of the American Society of International Law, Washington, D.C., April 26, 1956, Proceedings of the American Society of International Law (1956), 97-98.

[7] Ming-Min Peng, "Le vol a Haute Altitude et L'Article 1 de La Convention de Chicago, 1944," Revue du Barreau, June 1952.

[8] C. Wilfred Jenks, "International Law and Activities in Space," 5 Int. and Comp. L. Q. 99 (1956).

territorial sovereignty of a state beyond the atmosphere above its territory would be so wholly out of relation to the scale of the universe as to be ridiculous; it would be rather like the Island of St. Helena claiming jurisdiction over the Atlantic.

". . . any projection of territorial sovereignty into space beyond the atmosphere would be inconsistent with the basic astronomical facts. The revolution of the earth on its own axis, its rotation around the sun, and the planets through the galaxy all require that the relationship of particular sovereignties on the surface of the earth to space beyond the atmosphere is never constant for the smallest conceivable fraction of time. Such a projection into space of sovereignties based on particular areas of the earth's surface would give us a series of adjacent irregularly shaped cones with a constantly changing content . . . missiles, space stations and space ships moving in space would be constantly changing their position in relation to the subjacent territorial sovereignties at such high speeds that whatever relationship of control might subsist between earth stations and such objects in space would have no territorial aspect analogous to the control exerted by a state in its air space or territorial waters. Only activities within the atmosphere of the earth would appear to be susceptible of a degree of control similar in general nature to that which can be exercised in territorial waters or over a wider maritime frontier belt. By reason of the basic astronomical facts, space beyond the atmosphere of the earth is and must always be a res extra commercium incapable of appropriation by the projection into such space of any particular sovereignty based on a fraction of the earth's surface.[9]

Summing up his position, Jenks says:

"1. Space beyond the atmosphere is a res extra commercium incapable by its nature of appropriation on behalf of any particular sovereignty.

"2. It is most desirable that jurisdiction over activities in space beyond the atmosphere should be recognized to be vested in the United Nations and that legislative authority over activities beyond the atmosphere of the earth should be exercised by the General Assembly acting through or on the advice of an appropriately constituted body. If the political difficulties can be overcome, such an international solution of the problem of jurisdiction in space presents no insuperable legal difficulties.

"3. Failing such an international solution of the problem of jurisdiction in space beyond the atmosphere, it will be necessary to determine such jurisdiction on the basis of appropriate criteria inspired by analogies drawn from maritime and aviation law and to develop common international rules and standards governing the wide range of problems which would arise.

"4. Rules governing the extent to which, and manner in which,

[9] Jenks, Id. at 103-104.

national authorities may protect themselves against interference from space beyond the atmosphere with matters within their territorial jurisdiction or interfere, by electronic or other means, with activities in space for the purpose of making such protection effective, or for other reasons, will be necessary."[10]

Mr. Oscar Schachter: ". . . It is obviously of some importance to the future of space travel to know precisely what is meant by the term 'airspace' as used in international law. Does the term 'air' extend only to the upper atmospheric regions? Should it be defined in terms of the composition and/or density of the gases? So far there has been no authoritative answer to this question. The reasonable answer, it would seem, is to consider that the term is used in aviation treaties and therefore it is presumably intended to refer to the part of the atmosphere which contains enough air to allow aircraft (including balloons) to fly. Up to now balloons have gone as high as 21 miles, but it is estimated that air sufficient for flight extends about twice as high above the earth. Beyond that there is no airspace so far as aricraft are concerned.

"Whatever may be the precise boundary of the airspace, it is clear that when we go beyond it we are legally in a no-man's world. Before rocket ships were conceived of, some jurists maintained that there could be no upper limits to the territory of a state. A legal argument put forward for this was that 'in the air, the higher one ascends, the more damage a fall of objects will cause on the earth.' Consequently, since a country has the right to protect itself, it should have the right to control, as its territory, those areas above it which, if used by others, could involve damage to the country below. On this theory, the territory of a country would presumably extend upward as high as the earth exercises gravity over an object shot off into space – that is, as far as the farthest point from which a rocket would fall back on the earth.

"Although this approach might have seemed plausible to international lawyers years ago, it can hardly be justified when we consider its possible application. In the first place, the effect of the gravitational pull of the earth on an object varies with the shape of the object and the speed with which it moves. Obviously, therefore, it would be impossible to fix boundaries on the assumption that objects within these boundaries would fall back on the earth. Even if it were decided to establish an arbitrary limit (which would be related to the pull of gravity exerted on a rocket ship moving at a given speed), there would be great practical difficulties. For example, a rocket ship moving at, say, 25,000 miles per hour would not remain long over the territory of the country from which it started. It would pass through several countries – providing we extended their territories upward considerably beyond the 'air-space,' but it would be extremely difficult – in-

[10] Jenks, Id. 113-114.

deed, practically impossible – for those in the rocket ship to know when it left one country and entered another.

"Similarly, the space station, held in its orbit by the force of gravity and moving 1,075 miles above the rotating earth at 15,840 miles per hour, would be passing over national territories, but it would be quite impossible to ascertain in practice when it crossed the theoretical boundary lines.

"Thus, the whole idea of determining the height of national territory in terms of gravity is not only unsound scientifically, but quite useless from the standpoint of legal rules.

"It has been proposed that the upper territory be limited in terms of a nation's power to exercise effective control. Presumably, this means that if a state can 'control' (that is, stop) the flight of another state's rocket ship or guided missile at a certain distance, then territorial sovereignty should be limited to that distance. This position has been put forward by a distinguished authority, John C. Cooper, the director of the Institute of International Air Law. He has proposed 'that at any particular time, the territory of each state extends upward into space as far as the then scientific progress of any state in the international community permits such state to control space above it.'

"It is interesting to note the resemblance between this approach and the old 3-mile rule which has fixed the area of a country out into the ocean. This 3-mile rule was also based on the idea of effective control – in particular, on the range of shore-based artillery batteries. At the end of the eighteenth century, these batteries had a range of about 3 miles, and therefore it was considered that that portion of the sea was within the control of the state.

"Although the principle of effective control has been important in international law, one wonders whether it should be applied to this new problem of space travel. It would seem to mean that whenever a country could prevent or interfere with the movement of a rocket ship or space station it would have the legal right to do so. Would this not, in effect, simply be a rule that 'might makes right'? And would it not place rocket ships and space stations at the mercy of those national states which were able to interfere with their free passage?

"There certainly does not appear to be any compelling reason in law or principle to carry national sovereignty this far. Indeed, any attempt to extend national territory higher than the airspace is bound to involve difficulties. Why not, then, fix the limit at the upper boundary of the airspace and no higher?

"Beyond the airspace, as already noted, we would apply a system similar to that followed on the high seas; outer space and the celestial bodies would be the common property of all mankind, over which no nation would be permitted to exercise domination. A legal order would be developed on the principle of free and equal use, with the object of furthering scientific research and investigation. It seems to

me that a development of this kind would dramatically emphasize the common heritage of humanity and would serve, perhaps significantly, to strengthen the sense of international community which is so vital to the development of a peaceful and secure world order."[11]

Mr. Schachter states his ideas in similar language, saying:

"Before considering the space beyond the airspace, it might be noted that the airspace itself has not been precisely defined. Does it extend to the upper atmospheric regions; and if so, are its limits to be defined in terms of the composition of the gases or the density? The most reasonable rule would seem to be one that defines the airspace in terms of the atmospheric elements necessary to 'lift' aircraft; a limit expressed in these terms would be in keeping with the purpose and intent of the treaties relating to aviation, which have thus far defined the upper limits of state sovereignty.

"When we go beyond the airspace we are legally in a no-man's world. Theories have, however, been suggested to extend state sovereignty above and beyond airspace. One view suggested by a distinguished authority is that the 'territory of each state should extend upward into space as far as the then scientific progress of any state permits such state to control space above.' (John C. Cooper, International Law Quarterly, July, 1951, p. 418.) It is difficult, however, to envisage how this principle of effective control can be applied in the regions above the airspace. Perhaps it means the space in which a national state can control (*i.e.*, prevent) the passage of a rocket spaceship. But would not that mean that whenever any state could interfere with the movement of a spaceship, it would be considered to have the right to do so. Is this not in effect a rule that might makes right? Would it not place spaceships at the mercy of those national states which are able to interfere with their free passage? There does not appear to be any compelling reason in law or practice to carry state sovereignty this far. It is sufficient to limit the outer boundary of a state's territory as presently under international law, to the region known as the airspace and not beyond.

"If we exclude state sovereignty in the outer space what rules will apply? This does not seem to be an insuperable problem. We have an apt analogy in existing international law, *viz.*, the regime of the high seas. The outer space, like the open sea, is not and should not be under the sovereignty of any national state whatever; in other words, no state can have the right to acquire this space any more than it has the right to acquire parts of the open sea. Nor similarly, should any state have the right to exercise jurisdicition or police parts of outer space.

"However, this does not mean that the outer space would be in a condition of lawlessness and anarchy. Like the high seas, it would be

[11] Schachter, *"Who Owns the Universe?"* published in: Ryan, Across the Space Frontier, New York, Viking Press (1943), 118, 128-131.

governed by rules of international law which would provide for a degree of legal order and at the same time preserve the fundamental principle of its freedom."[12]

Dr. Welf Heinrich Prince of Hanover discusses the problems of sovereignty and jurisdiction, ". . . one ought to examine whether the reasons arguing in favor of extending the sovereignty into the airspace above the national territories might safely be applied to the area beyond the atmosphere stretching above these national territories.

"This, however, would have to be answered in the negative. . . . all those facts which make the close affinity of the airspace with the earth appear to accord with the laws of nature, in no way apply to the vacuum beyond the atmosphere, for only the air-filled regions are so automatically connected with life on the surface of the earth that they may be considered part of it. This 'correlation determined by considerations of space and sovereignty,' however, does not exist between the area beyond the atmosphere and the lands and waters underneath it. Thus, the area beyond the atmosphere cannot be considered an 'integral part' of any national territory. . . . two conditions will have to be fulfilled for a nation to exercise its sovereignty over a certain area:

> "There must be an area with frontiers which although invisible, will be capable of being determined. On the other hand there must be a possibility of exercising 'effective control.'

"Both conditions, however, do not apply in the case of regions beyond the atmosphere.

"Even when drawing imaginary frontiers above the boundaries of a country it will be quite impossible, within the limits of our present technical development, to ascertain whether some event has taken place above the territorial frontiers of a certain state.

"Such national frontier can no longer be determined with the kind of distances there are between the surface of the earth and the regions beyond the atmosphere.

"With the entire solar system perpetually in motion and the earth, involved in this process of perpetual motion, travelling along a fixed course while itself rotating, an extension of vertical frontiers from the earth into the area beyond the atmosphere would be out of the question.

"Admittedly, in order to exercise the sovereignty an actual occupation within the meaning of the law of things need not have taken place . . . nor will the authority of the state be required to show itself continuously. Equally, there is no fixed rule according to which a nation should meet immediately and directly on the spot every objectionable action directed against it from the territory in question.

"On the other hand there must be a possibility to exercise control.

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[12] Schachter, "*Legal Aspects of Space Travel*," 11 Journal of the British Interplanetary Society 14, (1952).

"The fact that we are already in a position to have rockets penetrate for a short time into the area beyond the atmosphere, cannot be held to constitute a 'possibility to exercise control' over regions beyond the atmosphere.

"Thus, to extend the sovereignty of a ground state into the area beyond the atmosphere above its territory hardly seems to be a practical proposition, even if limits be determined for such regions.

"On all these grounds an extension of national sovereignty into the area beyond the atmosphere will be inadmissible, with the result that this area must be deemed free territory just like the airspace above the high seas and regions outside the jurisdiction of any state."[13]

It will be noted from the foregoing review that the general idea of space law sovereignty and jurisdiction has finally become fairly well thought out.

After concluding the review, it seemed to me that the jurisdiction of space law might well be defined in scientific accuracy. At about this point in my quest, I received a telephone call from Dr. Theodore von Karman inviting me to spend the evening with him. He had just arrived in Washington from Paris.

By coincidence, this summons started a chain of memories. In the early 1940's I had the privilege of performing some small legal services for Dr. von Karman and for his sister, Dr. Josephine de Karman. And then I had the further privilege of constant association with the Karmans during the founding of Aerojet and the war-time management of that enterprise. Every now and then, during this harrassing period, a bright and cheerful event would occur, each of which is still hallowed in memory. One of these was in the autumn of 1942, when "the Boss," as I was privileged to call the good Doctor, advised me confidentially that the University of California at Los Angeles was to award him an honorary degree and, with his characteristic deference and kindliness, he asked whether I would like to attend the presentation. On this occasion, I drove from Pasadena to Westwood with "Pipo," the diminutive name by which Dr. Josephine de Karman was affectionately known to thousands of people throughout the world. On our way to Westwood, the thought suddenly occurred to me that "the Boss" had received so many honorary degrees no new ones were left to give and I pointed this out to Pipo. She obviously enjoyed the situation because she replied, "Ah, Mr. Advocate, wait and see." A short while later, at the general convocation, the Provost of the University of California at Los Angeles awarded the Boss with the degree of Doctor of Laws! On the way back to Pasadena, we had a great deal of fun speculating on the future career of Attorney von Karman.

So, a few weeks ago as I pondered on space law jurisdiction and my imminent visit with "the Boss," my mind went back fifteen years

[13] Dr. Welf Heinrich Prince of Hanover, "Air Law and Space," Thesis submitted to the Faculty of Law and Political Science at the Georg August University of Goettingen, 59-60 (1953).

to this incident and I decided, as of old, to discuss my problem with the good Doctor. As always, Dr. von Karman formulated a precise answer as to the jurisdiction of space law. During the evening he told me that he had delivered a paper last year at a luncheon at the University of California, Berkeley, entitled "Aerodynamic Heating—the Temperature Barrier in Aeronautics" and in that paper he had occasion to use a diagram made by Masson and Gazley of the Rand Corporation showing the possible ranges for continuous flight in the velocity-altitude coordinate system. Later on, he sent me a copy of his paper which contains the Masson and Gazley diagram. He said that his diagram, although designed to show the variation of velocity versus altitude for various values of dynamic pressure and equilibrium pressure, in the hands of a skilled person could readily be used to show the regimes of atmospheric and extra-atmospheric flight and to depict the jurisdictional boundary lines thereof.

Alas, as I do not have the skill, I have unskilfully redone the Masson and Gazley diagram [see Figure 1] to indicate curves showing the high altitude sounding rocket regime, the earth orbital satellite regime and the Kepler regime [earth escape velocity], and some supernumerary information.

To establish sound bases for demarcation of air and space jurisdiction it is necessary to consider that the conditions for accomplishing aerial flight, that is to circle at constant altitude, are weight equals aerodynamic lift plus centrifugal force. The aerodynamic lift decreases with altitude because of the decreasing density of the air and in order to maintain continued flight beyond zero air lift, centrifugal force must take over. Consider the flight of Captain Ivan C. Kincheloe, in which he took the X2 rocket plane to 126,000 feet altitude. His flight was strictly an aeronautical adventure and did not partake of space flight. At the altitude indicated aerodynamic lift carries 98% of the weight and only 2% is centrifugal force, or "Kepler force." It will be noted that in the corridor of continuous flight when an object reaches approximately 275,000 feet and is traveling at 35,000 feet per second, the Kepler force takes over and aerodynamic lift is gone. This is a critical jurisdictional boundary.

I have reproduced the Masson and Gazley right side curve — the so-called temperature barrier, or heat barrier — simply to show the present state of the art, and thus arbitrarily to delimit the corridor of continuous flight. This line has nothing to do with the jurisdictional question as improved techniques in cooling and discovery of heat resisting materials will undoubtedly change this curve.

One scientific principle must be crystal-clear in the minds of the lawyer and the statesman, namely, the legal problems involved in space travel and exploration are unlike and are different in kind from those involved in maritime navigation and in air navigation, and only very limited analogies may be derived from the corpus of maritime and air law.

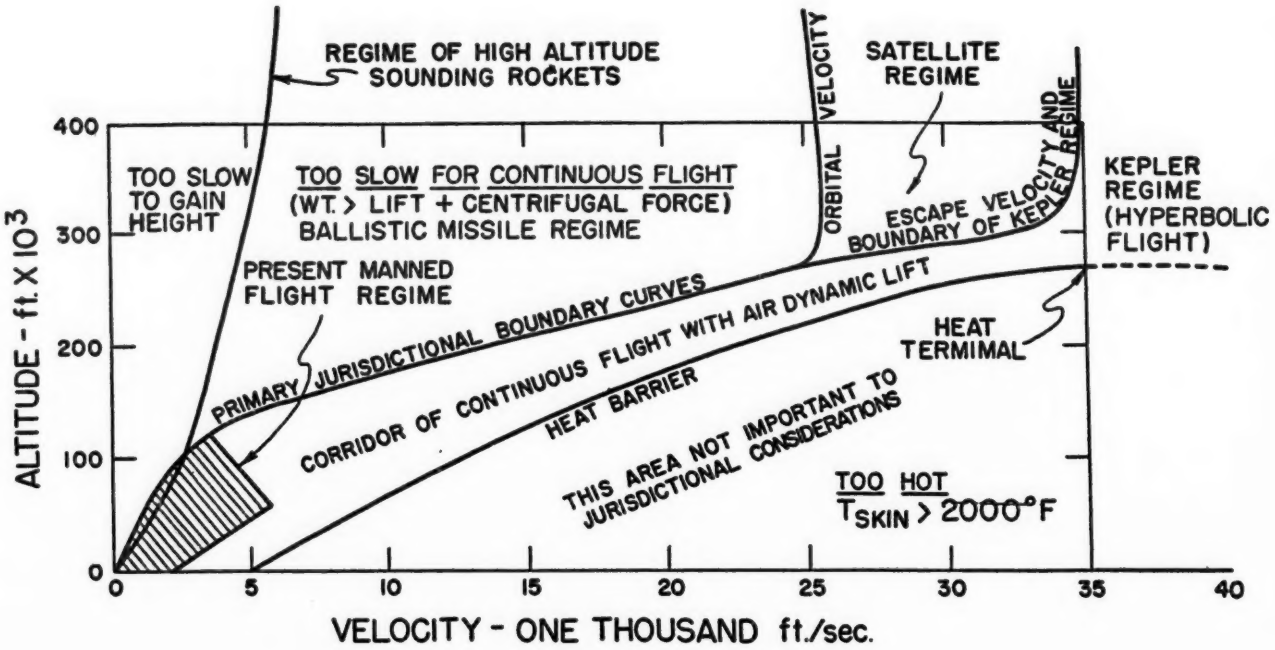

FIGURE 1

DIAGRAM SHOWING REGIMES OF ATMOSPHERIC AND EXTRA-ATMOSPHERIC FLIGHT AND DEPICTING THE JURISDICTIONAL BOUNDARY LINES

On a number of occasions, treaty makers and judicial bodies have had to face up to the solution of legal problems in connection with new developments in civilization. We will discuss this point very briefly and refer only to a few American authorities.

Justice Brandeis, in *Jaybird Mining Co.* v. *Weir,*[14] stated that "It is a peculiar virtue of our system of law . . . that an expression in an opinion yields later to the impacts of facts unseen."

Justice Cardozo, in *Paradoxes of Legal Science,*[15] pointed out that "The impact may come from a new fact. It may come from a changing estimate of policy or justice . . . what was ruled or next to ruled was well enough often according to the wisdom of its day. The light of a new day has set it forth as folly."

Justice Cardozo also said, "Stare decisis perpetuates error, prevents courts from adopting the law of the changed needs and desires to society, . . . it is an abdication of reasoning power, judgment and responsibility of the present generation of lawyers."[16]

Solomon Goldman[17] quotes Justice Brandeis as saying, "In differentation, not in uniformity lies the path of progress."

Chief Judge Loughran, of the Court of Appeals, state of New York, has pointed out that[18] ". . . I cannot go along with those who insist upon a rigid and mechanical adherence to the decisions of the past, without regard to the impact of later day social, economical and political changes that have been wrought in the world about us. Indeed if we were to be limited to slavish adherence to precedents and were not free to apply the decisions and their underlying principles to changing conditions and situations which did not exist and were not contemplated when the decisions were made, our decisional law would in great measure be no more advanced today than it was generations ago."

Judge Loughran also stated[19] ". . . the danger is ever present that deference to the teachings of the past may lead us to approach current issues with minds attuned only to the spirit and attribues of a bygone day and may deprive us of the quality of being responsive to the needs and interests of the here and now."

Again, Justice Brandeis, in *Burnet* v. *Coronado Oil and Gas Co.,*[20] wrote, ". . . Where correction through legislative action is practically impossible, this Court has often overruled its earlier decisions. The Court bows to the lessons of experience and the force of better reason-

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[14] 271 U.S. 609, 619; 70 L. ed. 1112; 46 S. Ct. 592 (1926).

[15] *Paradoxes of Legal Science,* p. 63, *Nature of the Judicial Process,* p. 15 (1928), quoted in "Decisions in The Court: Stare Decisis or Flexible Logic," 34 American Bar Association Journal 887, 888 (1948).

[16] Decisions in The Court, ibid.

[17] Goldman, The Words of Justice Brandeis, New York (1953), p. 63.

[18] *Some Reflections on the Role of Judicial Precedent,* Loughran, Chief Judge of the Court of Appeals, State of New York, 22 Fordham Law Review 1 (1953).

[19] Ibid at 2.

[20] 285 U.S. 393, 407, 408; 76 L. ed. 815; 52 S. Ct. 443 (1932).

ing, recognizing that the process of trial and error so fruitful in the physical sciences is appropriate also to the judicial form."

Justice Holmes summed up his viewpoints by stating, in *The Path of the Law*,[21] that ". . . it is revolting to have no better reason for a rule of law than that it was laid down in the time of Henry IV."

In a philosophical tenor, John Dewey wrote,[22] "Here is where the great practical evil of the doctrine of immutable and necessary antecedent rules comes in. It sanctifies the old; adherence to it in practice constantly widens the gap between the current social conditions and the principles used by the courts . . . The sanctification of ready-made antecedent universal principles as methods of thinking is the chief obstacle of the kind of thinking which is the indispensable prerequisite of steady, secure and intelligent social reforms in general, and social advance by means of law in particular. If this be so, infiltration into law of a more experimental and inflexible logic is a social as well as an intellectual need."

Justice Frankfurter, in *Braniff Airways* v. *Nebraska Bd.*,[23] stated that "One of the most treacherous tendencies in legal reasoning is the transfer of generalizations developed for one set of situations to seemingly analogous, yet essentially very different, situations."

The folklore and the philosophy of the law were authoritatively and finally handled by the Supreme Court of the United States in *Chicago & Southern Air Lines* v. *Waterman Steamship Corporation*,[24] in which the Court stated its determination that "The resemblance to water, rail and motor traffic must not blind us to the fact that legally, as well as literally, air commerce . . . has soared into a different realm than any that has gone before . . ."

The problems of maritime law and air law are susceptible of many common solutions arising from two basic affinities, namely (a) each medium is essentially terrestrial and is limited to terrestrial considerations, and (b) in each medium navigation is in a fluid ocean — air or water. The ability to fly or to float depends upon a terrestrial substance — and navigation does not depend upon centrifugal force or upon what we have called the Kepler Force.

No physical boundary could be more stark or real than the boundary shown in Figure 1 where the regime of aerodynamic lift ends and the regime of the Kepler Force takes over.

This complete mechanical dichotomy bequeaths to any animal conditioned to earth fundamentally new physiological and psychological problems, *i.e.*, the problems of existence in the terrestrial media are fundamentally different from the problems of existence in free space. Once we are no longer earthbound we have entered into a new existence which must be governed by new sets of rules and regulations.

[21] Justice Holmes, *The Path of the Law*, 10 Harvard Law Review 469 (1897).
[22] John Dewey, *Logical Method and Law*, 10 Cornell Law Quarterly 17, 26, 27 (1924).
[23] 347 U.S. 590, 603; 98 L. ed. 1015; 74 S. Ct. 826 (1953).
[24] 333 U.S. 103; 92 L. ed. 568; 68 S. Ct. 431 (1948).

The legal problems which will arise in connection with space travel will be vastly more complicated and in many respects entirely different from those which faced civilization when it abandoned God's wind for the steamship and when it took to flight in the air.

As to man qua man, many of the common relationships established in the vast body of anthropocentric law will have to continue in space. Among these are the simple laws of Moses known to the Western World as The Ten Commandments. But many of our concepts of terrestrial municipal law and positive international law must be abandoned.

This conclusion seems to be well supported by the authorities whose writings I have reviewed above. It is quite interesting to note that Professor Cooper's second area of jurisdiction, which he calls "contiguous space," quite naturally flows from the curve on Figure 1 delimiting the boundary of the earth orbiting satellite regime. We thus find scientific basis for Professor Cooper's second zone and we also may find philosophical justification for his second zone as he states that we must "provide for a right of transit through this zone for all non-military flight instrumentalities when ascending or descending." Professor Cooper adds that "we must accept the principle that all space above 'contiguous space' is free for the passage of all instrumentalities."

I have studied with care both the papers of Professor Cooper and Dr. Meyer and, despite the scientific basis for Professor Cooper's second zone, at the present time I can think of no useful legal reason for the existence of such a zone as an area of legal regulation other than the obvious possibility of extending nationalistic territorial jurisdiction into this zone. The main purpose of this latter proposition would be to project into the second zone all the rules and regulations now part of municipal law and international law governing aeronautical navigation. As I am opposed to such an extension in principle, I must express my current caveat. I have lingering doubt as to the soundness of my position but I am sure that further thinking on the matter by all concerned will lead to clear solutions.

In his State of the Union Message to Congress on January 10, 1957, President Eisenhower said:

> "A sound and safeguarded agreement for open skies, unarmed aerial sentinels, and reduced armament would provide its valuable contribution toward a durable peace in the years ahead. And we have been persistent in our efforts to reach such an agreement. We are willing to enter any reliable agreement which would reverse the trend toward ever more devastating nuclear weapons; reciprocally provide against the possibility of surprise attack; mutually control the outer space missile and satellite development; and make feasible a lower level of armaments and armed forces and an earlier burden of military expenditures. Our continuing negotiations in this field are a major part of our quest for a confident peace in this atomic age."

One week later, Henry Cabot Lodge, Jr., United States Representative to the General Assembly of the United Nations, outlined the proposed United States plan before the Political and Security Committee of the United Nations. He said, on January 14th:

> "My statement today . . . will look more to the future than to the past . . . Only recently, in his letter to Marshal Bulganin of December 31, 1956[25] President Eisenhower affirmed his belief that 'deliberations within the framework of the United Nations seem most likely to produce a step forward in the highly complicated matter of disarmament.'
>
> "President Eisenhower also declared the intention of the United States to submit new proposals in the United Nations."

Ambassador Lodge pointed out that the new proposals would center upon five points. One point, in his words, would be: "To insure that research and development activities concerning the propulsion of objects through outer space be devoted exclusively to scientific and peaceful purposes."

Elaborating on this point, Mr. Lodge stated:[26] "Scientists in many nations are now proceeding with efforts to propel objects through outer space and to travel in the distant areas beyond the earth's atmospheric envelope. The scope of these experiments is variously indicated in the terms of 'earth satellites,' 'intercontinental missiles,' 'long-range unmanned weapons,' and 'space platforms.' No one can now predict with certainty what will develop from man's excursion in this new field. But it is clear that, if this advance into the unknown is to be a blessing rather than a curse, the efforts of all nations in this field need to be brought within the purview of a reliable armaments-control system. The United States proposes that the first step toward the objective of assuring that future developments in outer space would be devoted exclusively to peaceful and scientific purposes would be to bring the testing of such objects under international inspection and participation. The United States earth satellite presently planned for the International Geophysical Year is an example of an open project devoted exclusively to scientific purposes and developed with the knowledge and approbation of the scientists of the nations represented in the International Geophysical Year. In this matter, as in other matters, we are ready to participate in fair, balanced, reliable systems of control."

Great Britain immediately endorsed the United States plan.[27] But Russia just as swiftly condemned it.[28] Vassily V. Kuznetsov, Soviet foreign minister, argued that the United States had air bases sufficiently close to Russia so that long-range missiles would not be needed. Russia, on the other hand, has no such bases, Kuznetsov asserted, and must therefore depend on long-range missiles. Consequently, Russia will

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[25] Dept. of State Bulletin of January 21, 1957, p. 89.
[26] Dept. of State Bulletin, February 11, 1957, p. 225 et seq.
[27] New York Times, January 16, 1957, p. 3, col. 1.
[28] 13 Bulletin of The Atomic Scientists, No. 3, 91, March 1957.

demand that the United States give up NATO bases before Russia will agree to the control of long-range missile experimentation.

In spite of this Russian opposition, the General Assembly of the United Nations, on January 25, 1957, adopted a resolution recommending that the Disarmament Commission give "prompt attention" to the proposals, and further recommending that a report of progress be issued not later than August 1, 1957.[29]

While past experience has indicated that progress for such a proposal may be rather slow, there is satisfaction in knowing that this problem is, for the first time, being discussed by the United Nations. While initially, international control under such a proposal would extend only to international participation and inspection in testing of such objects, eventually the objects themselves would be subjected to international control and kept "peace loving."[30]

I deeply regret that the United States has handled this matter in the manner shown by the record. The IGY earth circling satellite program should never have been the subject of discussion in connection with the Disarmament Commission.

Our paper would not be complete without mention of the increasing awareness of the problems of extraterrestrial exploration by members of Congress. In January of this year, Representative Frank M. Karsten introduced a Bill in the House of Representatives to create a joint Congressional Committee on extraterrestrial exploration to make "continuing studies of activities and problems relating to the development of extraterrestrial exploration and travel."[31]

This Bill is similar to one introduced by Mr. Karsten in 1955.[32] While the earlier Bill failed to receive the support that it merited, it is believed that the increasing awareness of the problems of space exploration over the past few years will assure Mr. Karsten's present Bill of a better reception.

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[29] Dept. of State Bulletin, February 11, 1957, 230.
[30] 13 Bulletin of Atomic Scientists, No. 3, 91 et seq., March 1957.
[31] New York Times, January 13, p. 2, col. 6.
[32] H.R. 7843, 84th Cong., 1st Sess. August 2, 1955.

MEDICO-LEGAL PROBLEMS IN CIVIL AVIATION

A STUDY OF DIVIDED JURISDICTION OVER PHYSICAL STANDARDS FOR AIRMEN UNDER THE CIVIL AERONAUTICS ACT OF 1938

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INTRODUCTION

ON February 29, 1956, CAB[1] Draft Release 56-6[2] was distributed to all interested segments in civil aviation. This notice proposed to liberalize existing regulations with regard to physical standards for pilots.[3] Coming at a time when present rule-making procedures were being questioned,[4] it elicited a great deal of comment. From the welter of conflicting opinion, one conclusion is justified, namely, whether or not 56-6 is ultimately approved or disapproved, a review of government regulation in this area is in order.

The authors will not attempt to pass on the merits either of Draft Release 56-6, or of the present standards. Rather, the purpose of this paper is to examine the governmental procedure which collects available data regarding physical standards and balances competing policies in behalf of the broad public interest.

In order to approach the problem most logically, the authors have devoted chapter I to an outline of the present regulatory scheme. Chapter II contains a critique of deficiencies in present rule-making procedure and suggestions for improvement. Chapter III discusses problem areas in the enforcement of Physical Standards regulations.

The authors hope that suggestions made in this paper will be helpful to those most vitally concerned with medico-legal problems in civil aviation.

I. ANCESTRY AND OPERATION OF CURRENT REGULATION OF PHYSICAL STANDARDS FOR AIRMEN

No full discussion of current medico-legal problems in air safety is possible without some knowledge of the government regulatory program. The purpose of this chapter is to give a skeletal history and

[1] Civil Aeronautics Board.
[2] 21 F.R. 1326.
[3] The release also proposes stricter standards in that it proposes to make disqualifying the probable presence of coronary heart disease, diabetes requiring insulin, epilepsy, or psychosis. See sec. 29.2(4)c, 29.3(4)c, 29.4(2)c.
[4] See *e.g.* Stovall, "Federal Concern with Civil Aviation Medicine," Feb. 18, 1955; Priest, "Research in Civil Aviation Medicine," Cong. Rec. Apr. 19, 1955; Magnuson, "Address to Airline Medical Examiners Association," Cong. Rec. Apr. 5, 1954.

outline of the present statute as it affects physical standards. Only a factual exposition will be presented here, all criticisms and suggestions being reserved to later chapters.

History Leading to the 1938 Act

Early evidence of public concern with air safety can be found in pre-1920 legislation.[1] Prior to that date, eight states and Hawaii had adopted flight regulations requiring registration of pilots and aircraft, and prescribing air traffic rules. The nature of aviation, however, soon crystallized the need for a more unified approach.[2] Inevitable Federal legislation was enacted in 1926[3] under the authority of the Commerce Clause.[4] For the first time, physical standards for airmen were introduced by Federal regulations.[5] Although the 1926 act was supplanted by subsequent legislation, the physical standards have remained substantially unchanged.[6]

A satisfactory degree of uniformity did not result even under the 1926 act because a provision for state cooperation in enforcement of the regulations had been stricken from the act, and because its definitions section seemed to exclude intrastate flight.[7] Further study[8] led to the adoption of the Civil Aeronautics Act of 1928,[9] which, as amended by Reorganization Plans III and IV[10] is presently in effect. Cases decided under this act indicate that power to regulate air safety is exclusively federal.[11]

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[1] Black, *Uniformity in Air Safety Regulation; Cooperative Federalism Applied,* 15 J. Air L. & Com. 181 (1948).

[2] See *e.g.,* Cal. Stat. § 1421 (1921) which provides that its aviation regulations shall be void wherever a jurisdictional conflict with federal acts exists. The same principle underlies the adoption in 1922 of the Uniform Aeronautics Act by the National Conference of Commissioners on Uniform State Laws. Ten states adopted the act by 1926.

[3] Air Commerce Act of 1926, 44 Stat. 569, 48 Stat. 1113, 49 U.S.C. 173.

[4] U. S. Const., Art. 1, § 8.

[5] 14 C.F.R. 20.104, 20.124, 20.134, 20.34.

[6] Compare C.A.R., 29.1 *et seq.* and 43.1 *et seq.* with Note 5, *supra.*

[7] Black, *supra* at 183. The point is made that many state institutions banned incorporation of federal standards by reference, and it was doubtful in those states that the state aeronautics officer would be a "rubber stamp" for federal standards.

[8] Report of the Federal Aviation Commission, Jan. 30, 1935.

[9] 52 Stat. § 73 (1938), 49 U.S.C. § 401.

[10] Under Reorganization Plans III and IV, as of June 30, 1940, the CAA and CAB were made separate entities. The reasons for the division appear in H.R. Doc. No. 681 and 692, 76th Congress, 3d Session.

[11] See *e.g. Northwest Airlines* vs. *Minnesota,* 322 U.S. 292 (1944); *Causby et ux* vs. *United States,* 328 U.S. 256 (1946).

However the need for state cooperation in the *enforcement* of these regulations has been recognized by CAA Safety Enforcement Guide (1947), and Rathje, *Constitutionality of State and Municipal Air Traffic Control,* 15 J. Air Law & Com. 108 (1948). There is adequate precedent for a greater delegation of authority for enforcement of federal law by state agencies, if desired. See *U. S.* vs. *Bailey,* 9 Pet. (U.S.) 238. A state *court* has already been held obliged to enforce penalties provided by the Federal Act. *Testa* vs. *Katt,* 330 U.S. 386 (1946).

The arguments against a greater delegation to state agencies are as follows: that it will be impractical for state enforcement officers to keep abreast of Civil Air Regulations, that the level of enforcement will vary from state to state, and that a high level of enforcement in one state will not be adequate protection for itself against the unsafe practices of neighboring states.

Dual Jurisdiction Under the Present Act

Two separate agencies, the CAB and CAA are required by law to deal with the regulation of air safety. The former is the rule promulgator and quasi judicial body; the latter is the enforcer and implementer.

Legislative jurisdiction of the CAB is delineated in the section of the act which provides:

> "The Board is empowered and it shall be its duty to promote safety of flight in air commerce by prescribing and revising from time to time . . . 6) such reasonable rules and regulations or minimum standards governing practices, methods, and procedures, as the Board may find necessary to provide adequately for safety in air commerce."[12]

In practice, initial responsibility for rule promulgation rests upon the Bureau of Safety Regulation, a subdivision of the CAB.[13] Any draft release proposing to revise current physical standards for airmen originates here.[14] After notice is sent out, a reasonable time is given for comments and hearings.[15] The Board then either adopts the proposal, amends it, or rejects it.[16]

The act also provides that every pilot possess a certificate denoting that he is "physically able to perform the duties pertaining to the position for which the airman certificate is sought."[17] Responsibility for administering the certification and recertification[18] procedures is entrusted to the Medical Division of the CAA.[19] There are presently three classes of airman certificates: airline transport (Class I), commercial (Class II), and private (Class III).[20] A Class I certificate entitles the holder to carry passengers for hire in instrument flight conditions[21] in an aircraft of any weight.[22] The physical requirements of this class are the most rigorous of the three,[23] and the renewal period

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[12] 52 Stat. 1007 (1938), 49 U.S.C.A. § 551(a).

[13] *Interview*, Mr. Bert Shields, CAB Bureau of Safety Regulation, Dec. 28, 1956. Mr. Shields explained that the functions of the Bureau with regard to physical standards are as follows: to keep records of air crashes, to coordinate all data obtained by it and other offices concerning human factors in air safety, to use this information in proposing appropriate standards, and to gather comment on its proposals for the consideration of the Board.

[14] See *e.g.*, C.A.R. Draft Release 56-6.

[15] Administrative Procedure Act § 4(a), (b), 60 Stat. 240 (1946).

[16] See Note 12, *supra.*

[17] Civil Aeronautics Act (1938) § 602(b), 49 U.S.C. 552 (b).

[18] 49 U.S.C. 552(b) provides that the Administrator may limit the duration of any airman certificate.

[19] See Part 650, § 6(4), 11 F.R. 177A, 13 F.R. 3045, 13 F.R. 9313, 14 F.R. 1303, 16 F.R. 2975, 19 F.R. 2975, 21 F.R. 7027. The Medical Division is one of several divisions that comprise the Office of Aviation Safety. It is the only medical group within the Federal Government directly responsible for the physical fitness of airmen. The staff of the Medical Division is composed of a chief, Dr. W. R. Stovall, two physicians, a physiologist, a psychologist, a physicist, and a biometrician. There are nine regional offices, each staffed by a medical officer and from one to three clerical assistants. There is an aeronautical center at Oklahoma City where considerable standardization work is carried out.

[20] C.A.R. 43.41.

[21] C.A.R. 43.62.

[22] C.A.R. 43.63.

[23] Compare C.A.R. 29.2 with C.A.R. 29.3 and 29.4.

for medical certification is six months.[24] The commercial and private pilot privileges are respectively more limited,[25] and the physical standards[26] and renewal periods are less strict.[27]

Impact of the Regulatory Machinery on the Applicant

Perhaps the best way to understand the practical operation of the administrative program is to trace the steps a pilot must follow in order to be permitted to fly.

Suppose Joe Pilot, who has had considerable flying experience, desires to become an airline transport pilot. He has successfully completed a training course with a large airline, and now applies for a Class I certificate. Joe would be given a list of "designated medical examiners in the area in which he lives and would make an appointment to see one of his choice.[28] It is the examiner's duty to decide whether Joe meets the physical standards for certification.

To assist him in this determination, the "designee" is furnished a *Guide for Medical Examiners* which gives the CAA interpretations of physical standards, and lists instructions on how to carry them out.[29] He is also equipped with examination forms which Joe is required to answer to the best of his knowledge.[30] In actual practice only a minimum of supervision of the designee is possible. Thus a great part of the success of the examination rests upon the competence of the doctor, and the seriousness with which he takes his duty.[31]

A successful "physical," however, is also dependent upon Joe's willingness to cooperate. He is expected to give a complete and honest account of his medical history so that the doctor can accurately diagnose whether or not he has a disqualifying condition.[32] Unfortunately, not every pilot is willing to give full disclosure, especially if he thinks he

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[24] C.A.R. 43.41(c).

[25] Compare 43.60 and 43.61 with 43.62.

[26] See Note 23, *supra.*

[27] Compare C.A.R. 43.41(c) and 43.41(b) with 43.41(a).

[28] A designated examiner (designee) is one appointed by the Medical Division to give Class I and Class II certification examinations. He is chosen because of his qualifications and specialized training. Authority to appoint Medical Designees is derived from Civil Aeronautics Act § 602(b), 49 U.S.C. 552. The usual charge for a Class I examination is $15.00.

[29] The *Guide for Medical Examiners* is but one of many Manuals of Procedure published by the CAA. The purpose is to give designees in the chain of command a consolidated list of instructions necessary to accomplish the technical phases of the Administrators Safety Program.

[30] This form is called Report of Airman Medical Examination. There is one for each class of certificate. The newest form is patterned after an insurance application, the pilot being reminded of the penalty for withholding or misrepresenting his medical history.

[31] In the Committee Proceedings of the President's Health Resources Advisory Committee, Mar. 28, 1952, p. 37, Dr. Stovall expressed confidence in the examiners designated to give Class I and Class II examinations. For the most part they are military-trained people. Many have served as designees for several years so that they have become trained in this specialty.

[32] Dr. Stovall, *Problems of Medical Certification and Recertification Procedures*, CAA Medical Division, August 30, 1956, p. 4.

has a defect that would or could cause a denial of certification. Regarding flying as his "life's work," he will go to great lengths to obtain a medical clearance, whether or not entitled to it.[33] The result is that the examiner is usually able to pick out "structural defects"[34] which are readily detectable, but may pass over "latent defects"[35] which are more easily concealed unless the applicant aids him. An attempt to achieve more adequate screening has been made by the issuance of new medical report forms designed to pin-point areas of disability.[36] Yet, in the final analysis, the effectiveness of the examination still remains, at least to some degree, within the control of the pilot.

If Joe were applying for a Class II or Class III certificate, the procedure would be substantially the same except that, as pointed out above, the standards he would have to meet would be lower. There is, however, one difference worth mentioning. Class I and Class II examiners are specially designated by the CAA Medical Division. On the other hand, any licensed physician, including Joe's own family doctor, may give the Class III, private pilot exam.[37]

Suppose, in the opinion of the examiner, Joe qualifies for the Class I certificate he is seeking. The doctor will issue to Joe a medical certificate,[38] and will forward a written report[39] of the exam to the regional CAA office for review. If the findings are satisfactory, no further action is taken. But if the Regional Medical Officer believes that the certificate was improperly issued, it will be recovered, and its reissuance will depend upon the results of further examination.[40]

In the event that the examiner finds that Joe has not met the certification requirements, Joe may nevertheless be eligible to fly on a "waiver" if he can demonstrate by his "operational record, ability, and judgment as an airman," that he can "compensate for his physical

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[33] Dr. Stovall, in his report to Health Resources Advisory Committee, *supra*, p. 38, explains the basis for this conclusion: He said, "We know that we have a lot of people flying who should not be flying because our tabulations of medical conditions reported is far below those of the total population, and far below those we would expect in the pilot group, though we don't have accurate figures for that particular group."

[34] Guide for Medical Examiners, Para. 33. A structural defect is one that is relatively static, that can be measured, and is not due to active disease. The following are included: diminished vision, diplopia and strabismus, deficient depth perception, defective hearing, spinal curvature and ankylosis, amputation, malformation, and atrophies.

[35] *Interview*, Dr. W. R. Stovall, Dec. 27, 1956. A latent defect is a passive deficiency that periodically "flares up" and incapacitates the pilot. Epilepsy, diabetes, certain cardiac conditions, and venereal disease are examples. Since there are stretches when the defect lies dormant and the pilot appears perfectly normal, a latent deficiency is easily concealed unless an accurate history is ascertained.

[36] See new Medical Report Form, CAA, 1957.

[37] 14 C.F.R. 406.12(C)2.

[38] C.A.R. § 43.41.

[39] 14 C.F.R. 406.11(b).

[40] It is not clear from the relevant statutory material whether the designee acts as a licensing agent or is merely authorized to express an opinion on which the CAA relies. Regardless of the designee's function, the CAA retains review power over the designee's acts.

deficiency."[41] If Joe has only a "structural defect,"[42] it is quite possible that he will be certified, subject to such limitations as may be necessary.

Suppose Joe is found to have a disqualifying "organic disease,"[43] and his application for a certificate is rejected by the CAA Regional Medical Officer.[44] Joe still has one more string to his bow—the right of appeal to the CAB. Upon filing with the CAB a petition for reconsideration, Joe is assigned a hearing at a place convenient to his residence or employment.[45] On the date set, his case is heard by a trial examiner[46] of the CAB who acts much like a judge in a civil court. Counsel for the CAA explains why the certificate was refused, and often utilizes expert medical testimony to substantiate the basis for the denial. Joe may counter by calling his own specialist to refute the previous testimony.[47] After all the medical evidence is heard, the trial examiner renders a decision as to whether the requirements of the particular standard in question have been met. A number of reversals in favor of the applicant have been obtained in this manner.[48] The decision of the examiner may be reviewed by the Board, on the record, but without further oral argument.[49] If the Board differs with the findings of the examiner, its conclusion will prevail.[50] Even if the examiner acted properly, the Board may mitigate the applicable standards by exercising its regulatory power, although the certificate thus

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[41] C.A.R. § 29.5.

Dr. Stovall in *Problems of Medical Certification and Recertification Procedures, supra,* describes the policy behind waiver as "the recognition that some form of flexibility is necessary for an equitable application of physical standards." The reasons are as follows:

a. The line of demarcation between the safe and unsafe physical standard is difficult to establish.
b. There is a great variation in the ability of persons to compensate for physical defects.
c. There is a lack of uniformity in the assessment and reporting of physical findings.
d. There is continuous fluctuation in the applicant's physical condition above and below the level for disqualification.

Dr. Stovall further states that it is easier to acquire a Class III waiver than a Class I or II waiver. The examiner merely notes the defect on the Class III applicant's report. The pilot then goes to a flight examiner who decides if he is entitled to fly on waiver after a flight test. On the other hand, Class I and Class II waiver applications are carefully scrutinized and reviewed by the Regional Medical Officer to determine whether the defect is static or whether there is actually a disease in progress.

[42] See Note 34, *supra,* for definition of "structural defect." The Medical Division has determined that a waiver should only be issued for "structural defects that are not too severe or progressive, and are not due to active disease." Guide for Medical Examiners, Para. 33.

[43] The CAA Medical Division has determined that "progressive mental, nervous, or *organic* disease cannot be compensated" so as to permit waiver. Guide for Medical Examiners. Para. 33.

[44] See C.A.R. 29.2 which prohibits certification if the applicant has ". . . organic or functional disease which *would* interfere with the safe piloting of aircraft."

[45] Civil Aeronautics Act § 602(b), 49 U.S.C. 552.

[46] Administrative Procedure Act, *supra,* §§ 2(e), 5, 7 and 8. All the present CAB trial examiners are lawyers. All but one have pilot's licenses. *Interview,* Francis Brown, Chief Examiner CAB, Dec. 28, 1956.

[47] *Interview,* Sydney Schneider, CAA Deputy Chief Enforcement and Litigation, Dec. 28, 1956.

[48] See *e.g.,* CAB Docket 3753, June 15, 1945.

[49] Administrative Procedure Act, *supra,* § 7(b).

[50] Civil Aeronautics Act § 1006(e), 49 U.S.C. 646.

issued may grant only limited privileges. In case of an adverse ruling, Joe may appeal to any court of competent jurisdiction, though he would be setting a precedent if he availed himself of this right.[51]

Finally, let us assume that Joe is involved in an air crash. Responsibility for accident investigation is vested in the CAB through a subdivision, the Bureau of Safety Investigation.[52] Although the Bureau delegates to the CAA investigatory jurisdiction over accidents of aircraft under 12,500 lbs., it retains jurisdiction over the larger accidents, or where "probable cause" is not apparent.[53] An investigator-in-charge is appointed, specialists are sent to the scene, and public hearings are held in which all interested groups may participate.[54] Information collected by this bureau is communicated to the Bureau of Safety Regulation for use in rule promulgation.[55] Any aircraft that is damaged must have its air-worthiness certificate renewed after repair.[56] If Joe is injured seriously to disqualify him for certification, it is unlawful for him to pilot an aircraft until he again meets the appropriate physical requirements.[57]

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[51] Administrative Procedure Act, § 10(a).
[52] The Board's investigatory power can be found in § 1002(e) of the Act (49 U.S.C. 642).
[53] The Administrator's investigatory power when the duty is delegated can be found in § 309 of the Act (49 U.S.C. 458).
[54] Power to hold hearings, etc., can be found in § 1004 of the Act (49 U.S.C. 641).
[55] *Interview*, Mr. Tanguay, Bureau of Safety Investigation, Dec. 28, 1956.
[56] C.F.R. 43.20, 43.21-1.
[57] 14 C.F.R. 43.42.

II. CRITIQUE OF PRESENT RULE PROMULGATION

Having outlined the present regulatory procedure, it is now appropriate to inquire whether it is well adapted to accomplishing its purpose. This chapter will concentrate on the promulgation of physical standards, from the research used to justify such regulations, to the drafting of the requirements into law. Finally, proposals will be made regarding *who* should be entrusted with rule-making in this area.

Lack of Adequate Research

The most elementary problem, but the most difficult and expensive one to cure, is the lack of authoritative medical research concerning physical standards.[1] One explanation for this deficiency is that the Act does not specifically require that regulations be based on scientific testing. Such a requisite can easily be implied, however, from the provision for "reasonable" standards, from the stress on accident investigation, and from the emphasis on communication of data

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[1] As this chapter was being written, it was announced that the Daniel and Florence Guggenheim Foundation had granted $250,000 for the creation of the Harvard Guggenheim Center for Aviation Health and Safety, with Dr. Ross McFarland as Technical Director. *N. Y. Times*, Feb. 18, 1957. p. 29, Col. 2.

between agencies and departments within agencies. Furthermore, the CAB has been satisfied to rely on ancillary research.

1. *Historical Reliance on Military Research*

Historically, civil air regulation has always relied on military studies and standards. When the original civil airman standards were introduced in 1926,[2] they were basically echoes of the prevailing military rules.[3] Yet, while military research has progressed to a point where four days of testing are required for the Air Force applicant,[4] no significant changes have occurred in civil air regulations.[5] Thus, whatever justification the Board might previously have had for relying on military standards has been lost by its failure to keep abreast of changes in military regulation, testing and research.

2. *Airlines Impose their own "Physicals"*

Understandably, the larger airlines began to organize their own medical departments in the late 1930's.[6] Members of these departments in turn formed the A.M.D.A.[7] to facilitate the transmission of medical information bearing on flight personnel selection and longevity.[8] The flight "physicals" given by airline doctors are more extensive than those required by the Civil Air Regulations.[9] They include laboratory studies of the heart, chest, blood and urine.[10]

3. *Majority View: Such "Physicals" Increase Safety*

The fact that life insurance benefits are generally payable where death of the insured arises out of scheduled airline operations, but are not payable where death arises out of non-scheduled or private flying,[11] also tends to bear out an assertion that scheduled airline flying is safer than other flying. That deduction in turn supports the idea that A.M.D.A. "physicals," superadded to the higher CAB standards for Class I certification, do in fact increase relative safety. The degree of correlation between physical fitness and accident control, however, remains unclear at this time.

4. *Draft Release 56-6—Research Vacuum Spotlighted*

The dilemma produced by the lack of research data is dramatized by the current debate over physical standards, elicited by the distribution of CAB Draft Release 56-6. Since this release proposes to liberalize

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[2] See Note 6, Chapter II.
[3] McFarland, Human Factors in Air Transportation, p. 88 (1st ed. 1953).
[4] *Id.* at 44.
[5] See Note 6, Chapter II.
[6] McFarland, *Op. cit.*, p. 88.
[7] Airlines Medical Directors Association.
[8] *Interview*, Dr. L. G. Lederer, Chairman, Medical Committee, Air Transport Association (A.T.A.), Dec. 27, 1956.
[9] See Formal Letter from Milton Arnold, Vice President, Operations and Engineering, A.T.A., to John Chamberlain, Bureau of Safety Reg., CAB, June 7, 1956.
[10] McFarland, *Op. cit.*, p. 89.
[11] See Specimen Ordinary Life Policy in Patterson, Cases of Insurance (3d ed. 1955) p. 805.

present standards, it has provoked a mass of medical response condemning any such revision downward. One of the chief spokesmen for the doctors is the C.A.M.A.,[12] an organization comprised mainly of CAA designees, most of whom have dealt with physical characteristics and flying for many years. In voicing its disapproval the C.A.M.A. has been forced to rely heavily on "opinion" and "accumulated experience" rather than authoritative scientific data.[13]

On the other hand, the alleged[14] scientific bases[15] of supporting the proposed changes are themselves subject to criticism by the C.A.M.A. on the grounds of probable inaccuracy and invalidity.[16] Such criticism merely throws the whole subject back into a no-man's land, with resolution dependent upon more reliable evidence.

5. Further Hints from the Army: Psychological Testing

The armed services have developed useful psychological tests. For example, in 1941, the Air Force devised the A.A.F. Qualifying Test which was found to be of considerable predictive value in selecting combat pilots.[17] Failure rate[18] among selected applicants could be reduced from 75% to 36% if such tests were employed. By contrast, only the most rudimentary psychological information is required by civil air regulations.[19]

Airlines have occasionally used psychological examinations in selection of pilots. The more usual practice, however, is to rely on educational background, flying experience, flight checks, and personal interviews.[20] This approach leaves unanswered the problems of interest and temperament for airline piloting, as well as questions of judgment and skill under stress of routine or adverse flying condi-

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[12] Civil Aviation Medical Association.

[13] See Letter from Joel Fisher, Counsel for C.A.M.A., to John Chamberlain, Bureau of Safety Regulation, published in *Contact*, Sept. 4, 1956, p. 12, col. 4.

[14] C.A.R. Draft Release 56-6, 21 F.R. 1326.

[15] The CAB listed two studies supporting greater leniency. First, it pointed out that the Franzen and Frimhall study, *The Relation of Accidents to Physical Defects Noted in Standard CAA Medical Examinations*, Report 3, Division of Research, CAA, July 1942, uncovered no significant relationship between noted physical defects and aircraft accidents. Second, it pointed out that the I.C.A.O. standards governing international flight are less strict in numerous particulars than CAB standards, and nevertheless have been accepted by the U. S. These standards are set out in *International Standards and Recommended Practices; Personal Licensing*, Annex I to the Convention on International Civil Aviation (3d ed. April, 1953, as amended, July, 1956). Finally, the CAB pointed to the small number of disqualifications under present rules, especially for men under 40, as justification for more lenient renewal requirements.

[16] See Bruyere, Proceedings of the C.A.M.A., Chicago, Ill., April 16, 1956, p. 49 *et. seq.*

[17] McFarland, *Op. cit.*, p. 42. To assist in making differential selection for the various flight crew duties, the Air Force also developed a series of tests measuring expressed interests, specialized aptitudes and abilities. The tests bore out previous theories regarding the human characteristics requisite to military flying. The tests were expanded in complexity by the Pilot Candidate Selection Research Program in 1947, but follow up studies measuring failure rates, accidents, instructors ratings and amount of extra time needed to complete the training program are not yet available. (See McFarland, *Op. cit.* p. 44.)

[18] Failure rate refers to the percentage of applicants who did not successfully complete the military flight training program.

[19] C.A.R. 29.3c.

[20] McFarland, *op. cit.* p. 45.

tions.[21] The high turnover rate among pilots,[22] despite high wage scales, tends to support the notion that airline testing procedures are inadequate.

Even if airline psychological screening were perfected, the whole area of private and commercial piloting would remain unrestricted. Such an omission would leave the situation as it is now—dependent upon the discretion and ability of examining doctors. These doctors are doctors of medicine, not psychology, many of whom are untrained in aviation medicine. The result of this practice is that psychological information is obtained in a hit-or-miss fashion.[23]

The authors believe that the CAB should follow the example of the Air Force, by devising appropriate psychological tests for civilian piloting. These tests should be applied to every class of pilot, although with increasing leniency towards commercial and private pilots. Such a program could only be properly administered by a government agency such as the CAA along the same lines as present CAA physical examinations.

6. *Present Status of Physiological Research*

Assuming adequate psychological testing were devised, the problem of physiological standards would remain at large. The skimpy research presently available gives conflicting implications regarding the relationship between physical defect and accident. At least two independent studies tend to support the Franzen and Brimhall[24] conclusions which gave rise to Draft Release 56-6.[25]

On the other hand, physiological factors are the most logical explanation of certain isolated deaths and near accidents in aircraft operations.[26] In addition, physiological tests have helped in selecting

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[21] *Ibid.*

[22] According to McFarland, *op. cit.* p. 46, the number of pilots who were separated from one airline was roughly ten times the number who died, transferred, or were grounded.

[23] For a clever and conscientious approach to obtaining psychological information about an applicant, see Address by William B. Smith, M.D., Chief Flight Surgeon, St. of Conn. Dept. of Aeronautics to Aero-Medical Association, March 29, 1954, Hearings before Committee on Interstate and Foreign Commerce, U. S. Senate, 83d Cong., 2d Sess. on S2647.

[24] See Note 15, Chapter II.

[25] One such study tested substandard PAA-Air Ferry Pilots hired in 1942, where no causal relationship between defect and accident was found. See McFarland, *op. cit.*, p. 90. The second was a study of Lockheed test pilots, where the number of defects averaged 3 to 5 per person. The number of accidents averaged less than 4 per year, of which only 1.4 was fatal during the five years tested. This was a surprisingly low figure considering the nature and extent of the flying operations. Furthermore, no causal relationship could be established between defects and those accidents which occurred. See McFarland, *op. cit.*, p. 90.

[26] McCann, "The Role of the Medical Examiner in Aircraft Accident Investigations," paper prepared for Flight Safety Foundation Seminar, Santa Fe, New Mexico, Nov. 10-12, 1956, pp. 6, 7. It is believed that the limited nature of such data can be attributed more to the lack of proper investigation of pilots involved in accidents than to the lack of a strong relationship between physical defect and accident. This belief is found on statistics indicating that "pilot error" is responsible for as high as 85 per cent of non-scheduled and private airplane crashes. "Pilot error" includes errors of judgment, however, having perhaps no relation to physical defect, and provides the explanation when cause of crash cannot otherwise be determined.

the physical types best adapted to high altitude flying[27] and similar tests are believed useful in predicting longevity of pilot service.[28] It is hoped that the Flight Safety Foundation job analysis will provide valuable information as to the correllation between physical defect and accident.[29]

Further research can be expected from universities, aeronautical institutions, and government sponsored programs.[30] Such informal research, however, is generally regarded as inadequate and undirected. Legislation aimed at providing a more substantial government research program has been introduced in the past [31] and recently reintroduced[32] as the "Civil Aviation Medical Act." This act proposes to establish a "Civil Aeronautics Medical Research Laboratory"[33] and authorizes a "Civil Air Surgeon" to

> "conduct . . . research . . . relating to the causes, diagnosis, control and prevention of physical and mental conditions . . . of civil airmen that might adversely affect safety in air commerce; . . . and to the medical causes of accidents in air commerce."[34]

The act also authorizes research fellowships,[35] and the participation of medical personnel in accident investigations, including autopsies where indicated.[36] Finally, the civil air surgeon is empowered to make

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[27] Keys, Mathews, Forbes, and McFarland, "Individual Variations in Ability to Acclimatize to High Altitudes," Proc. Ray. Soc. (London), S.B. No. 842, 126:1-29, 1938. Variations in basal pulse rate, blood oxygen capacity, and alveolar oxygen tension were some of the factors considered. Basal pulse rate is the rate of heart beat taken after six or seven hours of rest and before eating. Within certain limits, the lower the pulse, the greater the likelihood of good acclimation. Blood oxygen capacity refers to the ability of blood to carry oxygen from the lungs to needed areas in the body. Generally the greater this capacity, the greater the chance of good acclimation. Alveolar oxygen tension refers to the action of exchange of carbon dioxide for oxygen taking place at the capillaries of the alveoli (air cells) of the lung. The higher the tension, generally, the better the acclimation.

[28] McFarland, *op. cit.*, p. 103.

[29] The study may also explode a few myths regarding physical standards. Proof that such myths may exist in a time of such scientific enlightenment can be found in the 56.6 recommendations for changes in hearing standards, with which the C.A.M.A. agrees. Until somewhat recently, men who had defective hearing as measured against a quiet background were regarded as relatively unsafe. But against the reconstructed background of a cockpit, many of these men were found to have equal or superior hearing and comprehension of radio signals. The proposed standard will be more lenient for many pilots, yet will result in no compromise with safety. Such are the benefits of adequate research.

[30] The aeronautical center in Oklahoma, and Ohio State University School of Aviation Medicine both carry on continuous, although limited, standards research. See Statement of Major General Harry Armstrong, President, Aero-Medical Association, Excerpts of Meeting with President's Health Resources Advisory Committee, Feb. 28, 1952, p. 7. The CAA has sponsored similar research. See Address by W. R. Stovall, M.D., at the meeting of the Institute of Aeronautical Sciences, Jan. 29, 1953, Cong. Rec. Feb. 4, 1953. The studies to be carried on at the Harvard Guggenheim Center for Aviation Health and Safety also should bear on physical standards. See Note 1, Chapter II, *supra.*

[31] H.R. 10228 and S3677.

[32] On Feb. 4, 1957 the Act was reintroduced as S1045, H.R. 4275.

[33] Civil Aviation Medical Act, sec. 1403(a)3.

[34] *Id.*, sec. 1407a.

[35] *Id.*, sec. 1407(b)3.

[36] *Id.*, sec. 1407(1)5. There would seem to be ample power in Congress to require participants in aviation activities to submit to physical examinations under the Commerce Clause and the Necessary and Proper Clause. Autopsies present a more serious problem however. One treatise states that power to hold inquests is generally limited by state law to cases where death is believed causd by violent or

grants-in-aid to universities [etc.] for such research projects as are recommended by the Federal Advisory Council on Civil Aviation Medicine.[37]

The proposed legislation thus recognizes the need for continual research in civil aviation medicine. The authors are wholeheartedly in support of such a coordinated, long-term program. A great deal of experimentation would be required in the early years to bring standards up to date. When that time arrives, physical standards research can begin to probe ahead with technology, so that the man who flies each revolutionary aircraft, will be the one who is best equipped to do so, mentally and physically, within the limits of feasibility.

Critique of the Promulgation Procedure

Assuming that an adequate research program can be established, the next problem is how medical research data should be handled, that is *who* should promulgate the rules regarding physical standards. This question is now being debated in Washington mainly as a result of the distribution of Draft Release 56-6. The controversy centers on whether laymen or medical men should make the rules in this area.

1. *Lack of Medical Representation in the CAB*

Under the present system the CAB writes the regulations without the assistance of medical personnel, although it employs skilled men from other phases of science. Perhaps some justification for this omission is that the CAB may request assistance from the CAA Medical Division when it deems it necessary.[38] In practice, however, there has been inadequate communication.

Another argument which has been used to justify the present system is reference to the notice and hearing provisions of the A.P.A.[39] It is urged that interested medical groups are invited to participate in the hearings for proposed rules. Moreover, other interested groups

other unlawful means. The reason for this restriction is the well-guarded right to decent burial and undisturbed sepulcre which can be asserted by the deceased's next of kin. However, some jurisdictions extend the power to hold autopsies to cases where death is caused by accidental means. 13 Am. Jur. 108. The result is that few autopsies can be performed under existing law. However it is submitted that Congress could cure the defect in a number of ways. First, it could make violation of Civil Air Regulations a federal crime, and inquests of deaths suspected to have arisen from C.A.R. violation would thus fall within the power of Congress to execute federal criminal law. Second, it could rely on its broadening power under the Commerce Clause to conduct inquests for the benefit of air safety. Third, it could rely on its power to promote the general welfare of the United States. This power is granted in Article 1, section 8, and in its terms seems to refer to taxation. Authority to conduct autopsies might be argued to be a logical adjunct of taxation for the public welfare.

[37] *Id.*, sec. 1408.

[38] See Letter to Senator Bricker, chairman, Committee of Interstate and Foreign Commerce, from S. G. Tipton, General Counsel, Air Transport Association October 8, 1954, Hearings before Committee on Interstate and Foreign Commerce, U. S. Senate, 83d Cong., 2d Sess. on S2647, Revision Aeronautics Act, at p. 1277.

[39] See Note 49, Chapter I.

such as the A.L.P.A.[40] and A.O.P.A.[41] may also take part, bringing their own technical and medical personnel. But this procedure certainly cannot be defended as the most scientific means of assuring up-to-date legislation. It leaves the job of supplying medical information to outsiders, many of whom have vested interests inconsistent with public safety. Even if good medical advice is offered, the CAB has the option, within reason, to ignore it.

In order to remedy the present void, and to prevent the repetition of future draft releases not based on adequate medical counsel, the authors propose that some form of medical representation be required within the rule promulgating body. This gives rise to the question of which agency—the CAB or the CAA—is best equipped to handle rule-making in the area of physical standards. The case for each will be stated below.

2. *Alternative 1: Medical Representation on the CAB*

A persuasive argument for retaining rule promulgation in the CAB is that all civil aeronautics rule-making—traffic rules, plotting of airlines, required equipment, prohibited maneuvers, as well as physical standards—would flow from one central body. The coordination of regulations in one area with those in another area is clearly easier under such a plan.

Another argument is that decision-making power would remain in the hands of persons trained to balance conflicting policies, and who are, arguably at least, aloof from any one special interest.[42] Many groups concerned with civil aviation such as the A.L.P.A., the A.O.P.A. and the A.T.A. express the fear that their interest would be overlooked, and the overall good of aviation would suffer, if physical standards were left entirely in the jurisdiction of doctors. They argue that doctors are not properly qualified as legislators.[43]

Assuming that rule promulgation is retained by the CAB, the authors propose that the act should require medical assistance in the drafting of physical standards. At the very least, provision should be made for consultation with specialists in the areas of proposed change. It would also be advisable that a staff medical post be created within

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[40] The Airline Pilots Association is the union which represents airline pilots.

[41] The Aircraft Owners and Pilots Association represents private pilots and owners of private aircraft. Its membership now numbers in excess of 60,000.

[42] The members of the Board are appointed by the President of the United States and are thus not directly subject to the vicissitudes of elections. The members are, however, subject to the vicissitudes of Presidents, and to the pressures which the President himself must face. The threat of forced resignation from the Board is obviously a factor tending to work against the best performance of CAB duties. But all executive appointee posts are subject to the same criticism, and there is no practical way to cure the problem, since such procedure accords with our notions of checks and balances in a democratic government. We can only hope that CAB members will be appointed partly for their ability to carry out their honestly held ideas about public safety, without undue regard to private pressures.

[43] For views of interested groups in disapproval of delegation of rule-making power to medical persons, Hearings Before Committee on Interstate and Foreign Commerce, U. S. Senate, 83d Cong. 2d Sess., on S2647, Revision of Civil Aeronautics Act. pp. 1273-81.

the Bureau of Safety Regulation. While the CAB would retain final decision-making power, the staff doctor would be available to assist in interpreting physical standards research.[44] Moreover, it would be his duty to verbalize or edit physical standards regulation. Adoption of such a procedure would result in closer communication between rule-making and research.

3. *Alternative 2: Delegation of Physical Standards Rule-Making to the CAA*

A second alternative would be for the Act to delegate to a medical group within the CAA the whole jurisdiction over physical standard setting. There are many advantages to such a delegation. First, there would be less chance of misinterpretation of research data. Second, the importance of proper physical standards in civil aviation would be given greater emphasis. Third, if medical men set the standards, they would probably be higher, since a doctor is more aware of the risks of physical deficiencies than a layman. Finally, promulgation and enforcement would be combined into one body, thus mitigating present problems caused by dual interpretation.

On the other hand, there are also powerful arguments against such a delegation—basically the same arguments that favor retention of rule-making in the CAB. Coordination with regulations in other areas is made more difficult; higher standards may work against the promotion of civil aviation by making it available to fewer people; and

[44] It is understood that even with adequate research, there will be much room for doubt as to whether a given standard will result in the desired degree of safety. It might well be argued that if the Board is left with power to make this determination, laymen will still be entrusted with the interpretation of medical data, a duty for which doctors are better qualified.

To answer such an argument, it is necessary to break down the functions at stake. The gathering of medical facts is a research job, and best performed by trained medical men. On the other end of the process, the making of laws is a legal job and generally best performed by legislators or those appointed to act as legislators in a given field. In deciding what standard should result from given medical facts, the function is one of mixed fact and law. In a court proceeding, a question of mixed fact and law generally would be decided by a judge only where the issue was so clear that reasonable men could not differ. In most other instances, the jury, which is neither the fact gatherer nor standard setter, would decide. There are no lay juries in administrative proceedings, and thus no "objective bystanders" to decide what public safety requires in the area of physical standards. The whole purpose of administrative tribunals is the development of expertness with a view towards settling disputes and making rules more quickly and efficiently than by way of civil trials and hearings before and studies by legislatures.

If there were only one type of expertness involved in the field of physical standards, it would be easy to require that the experts in that field decide. Unfortunately, in our case there are two forms of expertness involved, namely expertness in the balancing of interests in civil aviation, and expertness in the interpretation of medical research. In an analogous situation, rate-making for railroads in interstate commerce, the experts in the broader field of public interest interpret complicated data, which arguably might be better interpreted by professors of mathematics or economics. The reason that this procedure is countenanced is that the danger of fragmentation of policy responsibilities away from a single source is regarded as a worse evil than errors of interpretation resulting from lack of technical training in a highly specialized field. For the same reason, the authors believe that, if the CAB is given the duty of defining safety generally, it must also be given the power to interpret medical data, regardless of the argument that medical men may be better qualified.

private interest groups, such as the A.L.P.A., A.O.P.A, and A.T.A., would regard such a delegation as antagonistic to them.

Feeling that the advantages outweigh the disadvantages, two sources have suggested a delegation along the lines outlined above. Dr. Backenstoe, former President of the A.M.E.A. (now C.A.M.A.) proposed to set up an office of civil aviation medicine whose power to set physical standards would be commensurate with that of chief Flight Surgeons of the U. S. Air Force and U. S. Navy.[45] A second source is a bill presently before Congress which was proposed by Senator Magnuson and the late Congressman Priest.[46] This act would specifically delegate the power to set minimum physical standards to a Civil Air Surgeon,[47] who would head an office of Civil Aviation Medicine in the CAA. The authors feel that there is much merit to these proposals.

4. *Conclusion*

In summary, the authors feel certain that research in physical standards is long overdue. The authors further urge that medical assistance in rule promulgation would be advisable. Either staffing the CAB with medical representation, or an outright delegation of legislative power to a CAA medical group would be an improvement from a public safety point of view.

[45] See Letter from Gerald A. Backenstoe, M.D., to Senator John Bricker, chairman, Senate Interstate and Foreign Commerce Committee, July 12, 1954, Hearings before Committee on Interstate and Foreign Commerce, U. S. Senate, 83d Cong. 2d Sess. on S2647.

[46] H.R. 10228 and S3677.

[47] Civil Aviation Medical Act of 1936, sec. 1405(1).

III. PROBLEMS OF ENFORCEMENT

The problem of *who* should promulgate physical standards for airmen is, of course, intimately connected with the problem of *how well* they are enforced. For no matter what standards are established by the C.A.R.'s, they are only as good as their uniform and effective implementation. The purpose of this chapter is to delineate the chief problems caused by dual jurisdiction and interpretation, and to propose solutions consistent with those of the previous chapter with the basic objective of a sound regulatory program for air safety.

The Need for Stricter Supervision of Physical Standards

In Chapter I it was shown that the CAA Medical Division is entrusted with the responsibility of enforcing the physical standards for airmen, as set out in Part 29 of the Civil Air Regulations.[1] Although the certification and recertification procedure was described, critical evaluation was reserved for this chapter. Difficulties arising out of this procedure will now be specifically discussed.

[1] See p. 5, *supra*.

Evidence is strong, that current regulations are not being strictly enforced. The Medical Division annually reviews 160,000 reports of physical examinations. Even though the incidence of disqualifying disease and disability in the general population of flying age is 15% to 25%, the overall denial rate for pilots is less than 1%.[2] In addition, insurance claims and autopsy findings have revealed advance stages of disease, whereas the pilot's medical records show him to be within normal limits.[3] Most alarming of all, perhaps, is the fact that 20% of the airmen carry no form of medical certification whatsoever.[4] If physical standards are necessary, and if a regulatory program is to be successful, better implementation must be afforded at the examination stage. Attention must be focused on the two prime participants—the pilot and the examining doctor.

1. *Disclosure by the applicant*

As to the pilot, the problem of producing more effective enforcement is one of encouraging the proper motivation. It has been said that "the Airline Transport Pilot is one of the most examined human beings in the world."[5] Not only must he pass the CAA physical requirements every six months, but if he works for a large airline he must also pass the industry medical examination.[6] The latter is often more stringent.[7] At each check-up he is faced with the same problem: if he fails to meet the qualifications, he will be unable to act as a pilot. With so much at stake, it is not hard to understand the pressures upon him to pass at all costs. Safety and public health motivations may become subordinated to the practical necessity of keeping a job.

It is not surprising, therefore, that pilots often resort to concealing facts relevant to their medical history, rather than take the chance of denial of certification. Furthermore, it would be naive to think this problem can ever be wholly cured. Expanded use of the new Class III "Report of Medical Examination" form, however, might aid substantially in mitigation. With questions designed to spotlight major physical and mental disabilities,[8] and a reminder of the statutory penalty for wilful misrepresentation,[9] this form may make evasion more difficult. Success of similar forms employed by insurance companies gives support to this belief. Presently, the new Report Form is employed only for Class III applicants.[10] The authors recommend that Class I and Class II forms be similarly renovated.

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[2] Stovall, *Problem Areas in the Medical Program, op. cit.*, p. 3.
[3] Stovall, *supra*, p. 4.
[4] *Ibid.*
[5] *Interview*, Dr. L. G. Lederer, Chief Medical Examiner, A.T.A., Dec. 27, 1956.
[6] *Ibid.*
[7] *Ibid.*
[8] See Appendix for copy of new Class III *Report of Medical Examination.*
[9] *Ibid.* Note that the applicant is required to certify that he has answered all questions to the best of his knowledge. Thus a double barreiled approach of better questions plus sanctions for misrepresentation is utilized in an effort to force disclosure.
[10] Class I and Class II Report Forms presently in effect do not mention the penalty for misrepresentation.

2. *Need for Trained Medical Examiners*

No matter what kinds of report forms are used, nor how many sanctions are employed, however, a thorough examination is largely dependent upon the alertness and skill of the examining doctor. A doctor who is unversed in aviation medicine tends to interpret the physical standards on a purely clinical basis. One authority has stated,

> "Since one of the principal tenets of clinical medicine is to encourage a patient vocationally as an aid to his recovery, this may be done at the expense of public safety, and the applicant may be inappropriately issued a medical certificate."[11]

A sizeable body of trained examiners is therefore essential to the Administrators' program.

As pointed out in Chapter I, "designated" medical examiners are required only for Class I and Class II physicals. Class III applicants may receive their examinations from any licensed physician.[12] Frequently a private pilot will shop around until he finds a doctor who will certify him.[13] The result may be serious, especially since undesignated doctors tend to be unduly lenient to applicants.[14] To remedy this situation, it is suggested that highly trained designees be required for all three classes. Since all examiners would be directly responsible to the CAA, the Medical Division could maintain a higher degree of surveillance than is now possible. Likewise, the quality of the examination would improve commensurately with the training and experience of the designee.

It must be noted, however, that exclusive use of designees would accentuate the problem of the cost of a medical exam. Presently, the fee is set by the doctors, the "going rate" being about $15.00, barring unusual complications.[15] Pilots often complain that these exams amount to a considerable out-of-pocket expense.[16] Under the suggested plan, with emphasis on more extensive physical exams, it might be difficult to retain even the $15.00 average. In addition, private pilots might have to travel some distance in order to find a designee. Thus, some thought should be given as to whether the federal government should share part of the cost and stabilize the fee at a "reasonable" level.

Finally, if the demand for qualified examiners is recognized, adequate provision must be made for their proper education. Cooperation from civilian universities can aid materially in this regard. Currently, Ohio State University is offering courses in aviation medicine and aviation physiology, as well as being the recipient of funds for a medical residency in aviation.[17] Harvard has within the past month been

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[11] Stovall, *Medical Certification-Recertification Procedures*, p. 5.
[12] See p. 8, *supra*.
[13] Stovall, *supra*, p. 4.
[14] *Id.*, p. 4.
[15] See Chapter I, Note 28.
[16] *Interview*, Dr. Stovall, Dec. 27, 1956.
[17] Stovall, *Problem Areas*, p. 2.

granted $250,000 for a Research Center for Aviation Health and Safety. Part of this fund will be used to train physicians.[18] U.C.L.A. also expects to become active.[19] Although this is a good beginning, it only scratches the surface. Other schools should be encouraged to participate. In place of the present informal approach, a government-planned program should be initiated, which would coordinate the medical research discussed in the previous chapter and examiner training into an orderly, comprehensive scheme. Such a program is dependent upon tangible, federal government support as well as aid from private organizations.[20]

Streamlining the Appeal Procedure

In Chapter II, the current appeal procedure in cases of denial of certification was outlined. It will be remembered that the pilot can appeal first to the CAA, through the Regional Medical Officer to the Chief of the Medical Division; then to the CAB, through a trial examiner, then to the Board itself; and finally, at least technically, to a court of competent jurisdiction.[21] This procedure is unnecessarily cumbersome. When two separate agencies are entrusted with appeal jurisdiction, each interpreting physical standards regulations according to its own philosophy, consistent application becomes almost impossible and the effectiveness of the whole program suffers.

For example, the regulations require that the applicant have "no organic or functional disease or structural defect which *would* interfere with the safe piloting of aircraft."[22] The CAA regards any case of diabetes as disqualifying under this standard because of the possibility of sudden incapacitation.[23] The CAB, on the other hand, interprets it less strictly and has reversed the CAA upon proof that the diabetic condition is one that can be controlled by diet.[24] Similarly, the Board appears to hold that an applicant need only meet the physical requirements at the time of his examination, compliance thereafter being his own responsibility. The CAA Medical Division, on the other hand, asserts that it is not practical to expect an applicant to keep close medical surveillance of himself.[25]

Many of the present appeal problems would be minimized if the proposals made in the last chapter were adopted. First, research would lead to specific regulations in more areas of disability. Second, medical representation in rule-promulgation would lead to more comprehensible standards. Third, if delegation of rule-making were made to the

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[18] See Chapter II, Note 1, *supra.*
[19] Stovall, *Problem Areas*, p. 2.
[20] *Id.*, p. 5.
[21] See p. 11, *supra.*
[22] C.A.R. 29.2(c), 29.3(c), 29.4(c).
[23] *Interview*, Dr. Stovall, Dec. 27, 1956.
[24] Examples of such reversals are listed in a letter from William R. Smith, M.D., Chief Flight Surgeon, State of Conn. to Senator William Purtell, May 12, 1954. This letter is printed in "*Revision of the Civil Aeronautics Act*," p. 1266.
[25] Stovall, *Certification and Recertification Procedures, op. cit.*, p. 7.

CAA, the question of dual interpretation would be virtually eliminated, since the functions of promulgation and enforcement would be united in the same body. Even under maximum rule-making conditions, however, some appeals would still be taken. Therefore, defects in the current unwieldy appeal system should be cured.

As a solution, the authors suggest the creation of a three-man medical panel to hear and decide denial of certification cases. One doctor would represent the rule-makers, one the pilot, and the third would be chosen by the other two. If the CAB retained promulgation power, it is recommended that this panel be substituted for the trial examiner. In the last chapter it was proposed as one alternative that the CAB have medical representation on its staff. These doctors would be logical choices to represent the rule-makers on the panel.[26] Once a decision is rendered by the panel it would be final except for appeal to a court of competent jurisdiction.

If delegation to the CAA is effectuated, the panel would replace the current complicated process of appealing from the Medical Division to the CAB trial examiner, to the Board itself. The Regional Flight Surgeon would be a good choice to represent the CAA, and the other two members would be selected as above. Again, the decision of the panel would be final, except for appeal to a court of competent jurisdiction.

Were either of these alternatives accepted, the problem of dual interpretation would be mitigated, and superfluous steps in the appeal procdure would be eliminated. The result would be that promulgation, enforcement, and judicial disposition of the administrative program would be better coordinated. A more sensible balance between maximum safety and the "right to fly" would result.

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[26] The authors suggest that it might be advisable for doctors who represent the rule-maker on the panel to be licensed pilots. Personal experience would give them first-hand knowledge of the demands of flying. The presence of such personnel would also give applicants in certification controversies a feeling of security in knowing that their interests are understood. The authors are not sure that such a suggestion is practical, however.

PROBLEMS OF LAW IN CIVIL AVIATION*

By James R. Durfee

Chairman, Civil Aeronautics Board

I APPRECIATE the opportunity your invitation has given me to come back to my home state today for a short visit among old friends.

The invitation came at a particularly opportune moment, almost exactly one year after I took up my new duties as Chairman of the Civil Aeronautics Board, when I was taking stock of my own reactions to the many and varied new experiences my work has brought me.

One of the things I should like to do tonight is to discuss with you the differences between the Civil Aeronautics Board and the Civil Aeronautics Administration, and I assure you that there are major differences despite the similarity of their names. One of the constant sources of confusion in Washington, and I am sure elsewhere in the country, is the extent to which these agencies are identified in the public mind.

A curious feature of this confusion, and perhaps an explanation for it, is that originally the Board and the Administration were one and the same organization. In 1938 when Congress passed the Civil Aeronautics Act it established a Civil Aeronautics Authority which performed most of the work now divided between the Board and the Administration. This Authority—which, incidentally, had the same initials as the Administration now has—CAA—was an almost exact counterpart to the ICC which has a similar plenary authority over rail transportation.

The present set-up of agencies regulating air transportation was substantially established in Reorganization Plans submitted to Congress by President Roosevelt in 1940. In general this Plan made the Administrator responsible for all functions relating to the enforcement and policing of the safety provisions of the Act and of the safety rules and regulations established by the Civil Aeronautics Board. The Board was assigned the tasks of economic and safety regulation.

To make this distinction a little clearer, let me give you some examples. It is the Board's responsibility to establish standards by which the "airworthiness" of aircraft is determined; and it is the Administrator's responsibility to certify aircraft as airworthy under those standards. It is the Board's responsibility to fix standards for licensing pilots; it is the Administrator's responsibility to examine and test pilots to decide whether they measure up to the standards in much the same way as drivers are tested for licenses—but with far more stringent standards. It is the Board's responsibility to set up the traffic

* An address given at the Annual Law Banquet, Marquette University Law School, May 8, 1957.

rules for flying planes; it is the Administrator's job to supply the traffic cops and to keep the traffic moving. It is the Board's job to decide, from an economic standpoint, which airlines should fly where; it is the Administrator's responsibility to check regularly to assure that those airlines operate over their routes safely.

This difference in jobs, of course, requires an entirely different type of organization for each. The CAA is a vast operating organization—of about 18,000 employees at present—with professional people of all types engaged in inspecting, testing, planning, research, design and control—with a network of offices and employees spread throughout the country working on airports, controlling air traffic, examining pilots, mechanics, and schools, and doing research on the problems related to its different jobs.

The Board (the CAB) is a small organization of about 600, just about 1/30th of the size of CAA, centered largely in Washington with a staff of specialists of a different sort—economists and accountants, engineers, hearing examiners and lawyers—devoted to helping the Board formulate rules and regulations and arrive at decisions, by gathering information, holding hearings and advising the Board.

The authority of the Administration is vested in one office—that of the Administrator who exercises a normal executive control. The authority of the Board is vested in a five-man body—and I should add, a bi-partisan five-man body—acting by majority vote. The Administration is part of the Department of Commerce, directly responsible to the Secretary of Commerce and through the Secretary, to the President. It is an executive agency. The Board is responsible to the Congress and is independent of direct executive control in all except the initial appointment of the members.

Now I have reviewed these distinctions between the Board and the Administration partly just to straighten out the differences between them in your minds, to give you some idea of the kind of agency I work for in Washington. I also had another purpose in mind, however, namely, to put some flesh on the bones of the main topic I want to talk to you about tonight—the difference between purely administrative executive agencies of the government and the independent regulatory agencies the so-called "quasi-legislative, quasi-judicial" commissions.

These two agencies—the CAA and the CAB—epitomize a distinction, a distribution of government functions, that runs through our whole system of government today on both the federal and state levels. It is not, I hasten to add, a hard and fast distinction, for the business of government isn't parceled out among agencies according to some theoretical master plan.

The Board, for example, as one of its important duties, has the job of advising the President on the aviation-economic implications of route awards in the international field. Obviously this job, which regularly entails participation with the State Department by the Board in negotiations with foreign governments over the exchange of air routes, is not of the sort that we normally think of a regulatory com-

mission engaging in. By and large, however, the Board fits the classic notion of a regulatory commission with delegated legislative powers and the CAA, the notion of an executive agency with ministerial administrative powers.

The distinction between the independent regulatory agencies and executive agencies is not a new one to the lawyer—in fact, the underlying concepts already have a "hornbook" quality about them even though much of the doctrine of Administrative Law has evolved in our own life-times. The concept of the independent regulatory agency has been with us in Wisconsin since 1874 with the creation of the original Railroad Commission, predecessor to the present Public Service Commission of Wisconsin. In the federal government the creation of the Interstate Commerce Commission in 1887 marked the first real federal independent regulatory agency.

I have noticed in my reading of late, and in speeches I have heard, an increasing tendency to ignore the distinction between independent regulatory agencies and executive agencies—a tendency to ignore the vital differences in the character of their work that require an entirely different approach to their tasks. The point I want to bring home tonight is that these differences are being subjected to a subtle and unfortunate erosion, partly at the hands of members of the Bar itself and partly at the hands of other professional interest groups.

I am not talking here of the constant—and I might say, welcome—constructive criticism and constructive legislation that helps the administrative agency do its job and serve the nation more efficiently and fairly. The administrative process and the regulatory agencies need a constant airing of their methods and objectives if they are not to stagnate and become ineffectual, or to grow beyond our concepts of constitutional government.

We are all familiar with the long and often bitter battle to make the courts take over this function of regulation—a battle which has, by and large, been decided in favor of administrative independence, subject to court review of action or conduct which as some have put it, is *ultra vires.*

But this battle was hardly over, with the passage of a Federal Administrative Procedure Act, which did not materially expand the function of judicial review, when efforts broke out on new fronts to stifle regulatory independence. Efforts are made to have Congress withdraw the limited quasi-legislative powers delegated to the regulatory agencies. Other efforts are made to concentrate control of regulatory functions in the executive branch of the government.

What makes these counter-thrusts against the regulatory process seem so anomalous is that despite the difference in objective, both schools of thought express their aims in virtually identical terminology. Both groups speak broadly of attaining a more efficient service of the public interest that will be more responsive to the popular will.

In detail, however, the expressions of these two groups reflect a

considerable divergence in objective. The exponents of greater executive concentration say there is excessive emphasis by regulatory agencies on formal, judicial-like procedures. The exponents of greater Congressional control speak of the inadequate protection of procedural rights that the present administrative process provides. Those favoring Congressional control emphasize the oppressive exercises of unfettered administrative power; while those favoring executive concentration speak of the inability of multi-headed, independent agencies to act effectively or obtain popular support for their programs.

In reciting these criticisms of the administrative process I do not mean to suggest that the exponents of either of these approaches to government intend to destroy the regulatory process. On the contrary, I think their criticism flows from an honest and well-intentioned desire to improve the government—to make it more responsive to the needs and desires of the nation, to assure greater protection of individual rights, to do the government's work more efficiently—all laudable objectives. The problem lies, I think, in the overemphasis in each case on a different one of these sometimes conflicting objectives.

But before I elaborate on this problem I want to tell you something more about the relations of the Civil Aeronautics Board with the Congress and with the Chief Executive—relationships that are by and large typical of those of all the independent federal agencies. When you realize the nature of these relationships and when you realize how extensive they are, I am sure you will all agree with me that the independent regulatory agencies are far from being a *"headless* 'fourth branch' of the Government" and, more important, are far from being unaccountable repositories of unfettered power.

The record shows that while the Civil Aeronautics Board is independent in voting and in exercising the broad discretionary powers vested in it, it renders a strict and regular accounting of its stewardship —a strict accounting for its program, its expenditures and the results of its work.

In these days when the newspapers are so full of controversy about the size of the Federal budget and so full of reports demanding that the President or the Congress should trim the budget, it should be obvious that the purse-string is a potent instrument of control in the hands of the President and the Congress over the activities of every Federal agency and department.

In addition, each year there are numerous appearances by the Board members or its staff before the Commerce Committees of both Houses, again in review of past actions and in consideration of the dozens of bills introduced each year contemplating the modification of the statutory scheme under which the Board operates.

Each year special problems arise which are the subject of searching scrutiny by Congress. For example, a Senate Investigating Subcommittee of the Government Operations Committee, headed by Senator Jackson of Washington, is now conducting public hearings on an

unfortunate premature "leak" of information about a Board decision last summer in order to check on the adequacy of the Board's information security measures and to determine whether stronger legislation is needed to prevent unauthorized disclosure of Board proceedings in process.

Last year a House subcommittee under Representative Celler of New York held extensive hearings on anti-trust aspects of the Board's record while other committees of both Houses considered proposals for a pervasive change in the basic statute under which the CAB operates. The Commerce Committee of the House conducted extensive investigation of the Board's safety regulations following the Grand Canyon accident last year and again this year after the recent tragic air accidents in New York and California. As Chairman of the Board I have testified eleven times within the past year before Congressional Committees on Board matters.

In hundreds of instances each year Members of Congress appear formally before hearings of the Board to urge the interests of their constituents in cases pending before the Board. And in literally thousands of instances the Board is queried by Congressional letters or phone calls to explain or justify its decisions, its policies and programs. This evidences a proper and careful concern by the Congress in the conduct of the powers delegated by it to regulatory agencies.

With this constant review of the Board's work by Congress and by the President I must admit that I am somewhat amused when I read about the unfettered discretionary power that the Board, as an independent agency, supposedly exercises. And with the constant Congressional attention that is focused on the Board's functioning, I have a similar reaction to suggestions that "The technique of direct legislative supervision has largely been neglected." (Prof. Schwartz, Legislative Oversight: Control of Administrative Agencies, 43 A.B.A.J. 19, 20 (1957)).

From the Board's experience with Congressional and Executive supervision, as I have summarized it here, but by no means exhaustively, I think it is simply incorrect to think of the independent regulatory agencies as being in any sense "unaccountable." The Board, and all the other independent regulatory agencies, are held strictly accountable to Congress from whom we derive our powers.

Does all this review impair the independence of the agencies? In a sense it obviously does. We on the regulatory agencies always know that if we were to embark on some foolish course, Congress is ready to pin our ears back. We always know that the President, with the prestige of his office, can criticize our programs or our decisions with a very powerful impact.

But in a very real sense these limitations on regulatory independence are nothing more than the limitations of responsibility in handling a public trust which, in the last analysis, we are nevertheless free to carry out and defend independently.

Now you may well ask at this point, after I have outlined the large extent of supervision of the Board, why I am concerned with proposals for greatly extended executive supervision or constant legislative intervention. The answer is simple. Both of these notions go far beyond what I have outlined as the existing measure of control.

Both ideas contemplate the direct intervention of legislative or executive control in the decision-making process, either by a general curtailment of the discretion of the independent regulatory agencies (called "canalization" of delegated power) or by vesting final authority outside the agencies for the dictation of specific results in individual cases.

Perhaps we can bring these problems into somewhat better focus if we consider for a moment exactly what the regulatory agency does in acting under its enabling statute. Other students of the process have said it far better than I, so let me refer to the words of Justice Jackson in *Federal Trade Commission vs. Ruberoid,* decided in 1952, where in a dissenting opinion he gave what I consider to be one of the clearest and most realistic descriptions of the process I have ever seen:

> "It may help clarify the proper administrative function . . . to think of the legislation as unfinished law which the administrative body must complete before it is ready for application. In a very real sense the legislation does not bring to a close the making of the law. The Congress is not able or willing to finish the task of prescribing a positive and precise legal right or duty by eliminating all further choice between policies, expediences or conflicting guides, and so leaves the rounding out of its command to another smaller and specialized agency. It is characteristic of such legislation that it does not undertake an end result in particular cases but rather undertakes to control the processes in the administrator's mind by which he shall reason results. . . . It attempts no more than to indicate generally the outside limits of the ultimate result and to set out matters about which the administrator must think when he is determining what within those confines the compulsion in a particular case ought to be." (343 U.S. 470, 485-86)

Professor Davis, in the introduction to his treatise on Administrative Law, outlined some of the reasons for the trend to this broad type of law-making that vests regulatory agencies with this peculiar status and authority:

> "The fundamental reason for resort to the administrative process is the undertaking by the government of tasks which from a strictly practical standpoint can best be performed through that process.
>
> "The legislative process and the judicial process, which are the principal alternatives to the administrative process, frequently fall short of providing what is needed. A legislative body is at its best in determining the direction of major policy. It is ill-suited for handling masses of detail, or for applying to shifting and continuing problems the ideas supplied by scientists or other professional advisers."

From my experience with the Civil Aeronautics Board I would say that the rationale of these quotations is especially apropos to the

functions of the Board. I think it is true that none of the regulatory agencies have had to concern themselves more exclusively than has the Board with purely legislative type work—the issuance of route certificates or franchises to airlines, rate-making, the granting of subsidies, the regulation of competition and the encouragement of new aviation businesses—work which is policy-making of the highest order having an almost determinative bearing on the development of an industry.

I think, at the same time, that the Board's experience demonstrates the wisdom of the original broad legislative grant of power to the Board and suggests the possible danger of extensive "canalization" of delegations of power. Let me again try with some examples.

The Congress gave the Board plenary authority over new route authorizations in 1938, after granting "grandfather rights" to existing operators. Aside from the customary public convenience and necessity standards adapted from older laws, the Congress gave the Board no guide to the resolution of elementary problems such as the extent of competition to be allowed except in the Statement of Policy in the Act which provided that the Board should consider to be in the public interest—and I quote:

> "competition to the extent necessary to assure the sound development of an air-transportation system properly adapted to the needs of the foreign and domestic commerce of the United States, of the Postal Service, and of the national defense."

These general mandates the Board had to fashion into a workable policy. And it has had to apply this policy—or perhaps I should say policies, since there have been changes—to widely varying conditions that have prevailed in the airline business since 1938.

Naturally while the industry was heavily subsidized with government funds, the Board was especially cautious in authorizing competition that would have been nothing more than a drain on the federal treasury. But with the tremendous expansion in the air travel market since the beginning of the Korean War, an entirely different approach was called for. An approach that emphasized the need for improvement in the quality and quantity of service, which, seemingly, only competition could bring. And an approach which recognized the concurrent need to strengthen and balance the overall air transportation system, a result that could only be accomplished in authorizing some of the smaller and weaker carriers, which were in some instances still subsidized, to participate in the major air travel markets.

The wisest of legislators would have been hard put to develop specific directions to the Board—for authorizing competition under the changing circumstances that the Board has faced since 1938. One of the major purposes for the creation of the administrative body exercising legislative powers under Congressional supervision was to bring flexibility to legislation to meet just the type of problem I describe.

It would be a tremendous task and burden for Congress to legislate

a specific and workable program for such a situation; and it seems clear that the national interest precludes Congress from attempting to do the job when it has so many even graver responsibilities to which its attention must be devoted.

This short example I have given you of the creative demands on the regulatory agency only begins to suggest the legislative problems the Civil Aeronautics Board has met in the 19 years of its existence. Since its inception new aeronautical enterprises undreamed of in 1938 have sprung up and taken their place with the pioneers.

To name some of the major ones that have arisen in commercial transportation, there are the all-cargo carriers such as Flying Tiger which serves Milwaukee on an East West route going to both coasts. There are the irregular or supplemental carriers, which are still before the Board in the last stages of a definitive investigation into their role. There are the air freight forwarders. There are the local service carriers, such as North Central and Ozark which provide service to and from Milwaukee for numerous smaller communities in the Mid-West. And, there are our international carriers, which today carry most of the global commerce of the world.

The challenge which, for example, the local service carriers present, a challenge which is the subject of intense study by the Board at this very time, is perhaps as great or greater than that of the trunkline carriers in 1938. The Board faces this challenge of adequate local air service and has faced it since the second World War, with no specific direction from Congress and no change in the original statute except for the grant of permanent certification by Congress in 1954.

These problems are not subject to an *a priori* Congressional fiat. The needs of each of these carriers including their need for subsidy, the needs of each city they serve, and numerous other elements must be weighed in the balance if we are to achive a healthy local service system bringing air transportation to the maximum number of communities in the United States with a minimum subsidy cost to the taxpayer.

Awaiting us just over the horizon are problems of still greater magnitude with the advent of what has come to be called the "jet age" —problems that will require us to reexamine the fundamental predicates of the economic and safety structure of air transportation in the United States and throughout the world.

Again, these problems cannot be met with *a priori* legislative assumptions—but neither can they await the inauguration of widespread commercial flights for by that time it will be too late. These are the kind of problems the independent regulatory commission is designed to cope with.

In discussing this concept of independent execution of a broad mandate I have concentrated exclusively on the experience of the Civil Aeronautics Board, but I would venture to say that each of the other six independent federal regulatory agencies could match these exam-

ples from their experience and their prospects—the ICC, for example, in coping with the problem of declining passenger volume in the rail field; the FCC in coping with the advent of television, or the FPC in coping with the problems of regulation of the production and transmission of natural gas and of further power development throughout the country.

The dynamic forces at play in all these areas will certainly test the vitality of the independent regulatory process and will undoubtedly strain the process at certain points. Congressional intervention will undoubtedly be necessary on occasion to direct the efforts of these agencies and the refinement of procedural techniques will undoubtedly continue.

In the last analysis, however, the process will best meet the demands on it if given the discretion within a broad outline determined by Congress, to preceed empirically, fashioning methods and remedies as it goes along and as conditions change.

In the face of the experience of the Board in the past 19 years, and of other agencies in the past 30 to 40 years, a return to narrower delegations of authority would be a retrogression that would threaten the continuation of effective government regulation. While improvements in techniques of Congressional supervision may be needed, "canalization" of authority is not one of them.

Let me summarize now some of the major points I have made on this subject of broad delegations versus specific delegations. If the commissions are to bear the responsibility for regulation in the various business fields, they need authority commensurate with that responsibility. If Congress is really going to delegate power—to free itself of the burdensome details once it has defined the basic policy objectives —it must delegate sufficient authority so that the agency can really choose the course best suited to the public interest without constantly asking for additional legislation.

In short, if the business of government is to progress, freeing Congress for the consideration of major policies and the supervision of delegated authority, the direction must be away from "canalization" of delegated powers. I think it may even be safe to hazard the opinion that increased "canalization" of legislative authority, except where needed in order to correct an administrative policy, is inconsistent with the important objectives of legislative oversight, for inevitably, the filling in of legislative detail deprives Congress and the legislatures of time needed to devote to basic policy examination and re-examination.

In my enthusiasm to deal with this question of legislative oversight I have allowed myself very little time to discuss the counter-trend I mentioned earlier, the trend toward executive concentration or domination. Perhaps it really isn't necessary to discuss this problem in front of a group of lawyers, for if it can be said that many American lawyers distrust the administrative exercise of legislative power, they abhor the very thought of the executive branch of the government exercising

a similar authority. Congress is even more adamant on this subject than is the legal profession.

It may be true, as critics of the independent commission movement have said, that executive agencies could conduct some of this regulatory business more efficiently than a commission. An executive agency could undoubtedly match a commission-type agency for "expertise." It could probably gather facts and information just as effectively. It may even be that a regulatory program would have greater support with the prestige of the President's high office behind it.

The fact remains that the independent commissions are exercising legislative, not executive or judicial powers. Recent history in some foreign countries has reinforced the historical belief in this country that the executive should not exercise legislative power. Congress is not going to give those powers over to the executive nor will it, I am sure, ever prefer the executive decision-making process to the deliberative process of the independent commission with its hearing procedures and decisions on the record.

On many occasions, of course, Congress has delegated broad authority to executive agencies, particularly under the emergency War Powers. But as I have said, the fact remains that as a general rule, Congress will not deliver its legislative authority to the executive even if it could constitutionally do this.

Perhaps the prevailing political situation in Washington provides another key to the understanding of this proposition, aside from any constitutional barriers. The responsibilities delegated to the commissions must be exercised in season and out, when Congress is in session and when it is not, and whether the White House and Congress are controlled by the same party or not. A Congress of one party will, I presume, never freely entrust its legislative powers to an Executive of another party if it has any alternative. It will—and perhaps somewhat reluctantly at times—entrust some of those powers to a bi-partisan Commission responsible to the Congress.

This mention of the relation of independent commissions to the executive gives me an opportunity to bring up an aside that is nevertheless very close to my heart. I am sure that everyone here knows that I am a Republican. I am proud of it and both proud and happy to have been appointed by the Eisenhower Administration to my present post with the Civil Aeronautics Board. I bring to that post the ideals and principles which have governed my whole lifetime. But this does not alter my realization and conviction that the President has appointed me to a bi-partisan legislative body that draws its power from, and is responsible to the Congress. I think all of the Members of all independent commissions must listen to what the President has to say and give it serious consideration—just as Congress itself listens to the President when he sends up his legislative and budget programs and the various other messages he submits. This is not political servility. It is the very essence of responsibility. However, just as Congress

retains its freedom to act as it sees fit after it hears the President, so do the Members of the independent commissions in their exercise of the legislative powers which they get from Congress.

I think that I have said enough now to convey to you my basic ideas on this subject of independent commissions. Before I close, though, I should like to hit one more relevant point. All of the lawyers here are familiar with the classic description of the independent commission which says that these commissions exercise quasi-legislative, quasi-judicial and quasi-executive powers. You see that the word "quasi" is in there in each part of the description. The dictionary says that "quasi" means "as if" or "in a sense." I suppose it has been used in the description I have just given you to mean "like" or "similar to."

There may be some truth to that kind of a description of administrative powers and I know that I often use the word "quasi-judicial" as a short-hand description of the Board's decisional process in route cases. But the description makes me intellectually a little "queasy."

Justice Jackson described the use of the word "quasi" as a "smooth cover which we draw over our confusion as we might use a counterpane to conceal a disordered bed," and I would alter this slightly to say that the word "quasi" in this context is an intellectual counterpane used to conceal disordered thinking. The truth is that the independent regulatory commissions are legislative, pure and simple, exercising delegated legislative powers.

They may follow judicial procedures in exercising their legislative powers, they may have judicial duties and executive duties incidentally, but the essence of the commission statute—the reason for its being—is the *legislative* power granted. Maybe it would help our thinking some if we borrowed a descriptive term from the lawyer's office which to my mind gives a pretty good idea of what a commission is—and that term is "junior partner." The commissions are legislative junior partners, given a responsible position in the firm with considerable leeway in making decisions but always subject to the senior partner's ultimate supervision and authority where needed.

I have brought you this message tonight, on a subject that is probably far from the daily interests of most of you, because I feel that there is a real need, throughout the Bar and not just among administrative practitioners, for a better understanding of the administrative process. I have only touched upon one of the host of problems in this field, but it is an important one because of the emphasis on this problem in the American Bar Association's general program. I am convinced, as a former trial lawyer myself, that as fuller understanding of the value of the administrative process to our government increases among lawyers, we shall see the legal profession turn its attention away from efforts to cripple or destroy this process, to efforts to improve it. That will be a good day for both our profession and the regulatory agencies. Still more important, it will be a good day for the people of this country in their constant search for better government.

INTERNATIONAL REVIEW

Compiled by J. G. GAZDIK in cooperation with DR. G. F. FITZGERALD and MR. A. M. LESTER (ICAO) and MISS S. F. MACBRAYNE.

I. INTERNATIONAL CIVIL AVIATION ORGANIZATION
Problems in connection with the Nationality and Registration of Aircraft in relation to aircraft operated by international operating agencies.

II. INTERNATIONAL AIR TRANSPORT ASSOCIATION
a. 13th Annual General Meeting, Madrid, Spain, September 9-13, 1957.
b. Summary of Report of the Legal Committee
Summary of Report of the Traffic Advisory Committee
Summary of Report of the Technical Committee
Summary of Report of the Financial Committee

III. INTERNATIONAL CHAMBER OF COMMERCE
Resolutions passed by the XVIth Congress, Naples, May 6-10, 1957.

IV. Translation of case taken from ASDA Bulletin No. 1 1957 (p. 13)—Zurich.

I. INTERNATIONAL CIVIL AVIATION ORGANIZATION

PROBLEMS IN CONNECTION WITH THE NATIONALITY AND REGISTRATION OF AIRCRAFT IN RELATION TO AIRCRAFT OPERATED BY INTERNATIONAL OPERATING AGENCIES

This subject, which relates to Article 77 of the Chicago Convention, was originally referred to the Air Transport Committee by the ICAO Council, following an Assembly Resolution passed in 1948.

Consequently, the Air Transport Committee commenced its study of questions pertaining to the nationality and registration of aircraft in 1948, continuing up to 1952, when other problems of greater priority forced the Committee to defer further consideration of this subject.

The subject, however, was taken up again later, particularly in relation to the Joint Ownership and Operation of International Air Services, and the Committee completed its report on November 15th, 1956. The report was presented to the ICAO Council who referred the Report to the Legal Committee, with the recommendation "that the Legal Committee be requested to advise Council concerning any problems of nationality and registration (particularly in connection with hire, charter and interchange arrangements) which may arise for the Organization and contracting States in applying the provisions of the Chicago Convention, and which the Council is required to consider pursuant to Article 77 of the Convention."

The scope of the examination by the Legal Committee of the subject in question will be determined by the terms of reference specified in the preceding paragraph and will presumably include, *inter alia*, the question of interpretation of Article 77 of the Convention which was examined by the Air Transport Committee, namely, whether the expression "provisions of this Convention relating to nationality of aircraft" which occurs in Article 77 of the Convention relates only to Chapter III of the Convention entitled "Nationality of aircraft" or whether it relates also to "other provisions of the Convention, the application of which is *dependent* on the nationality of aircraft." Also, the Legal Committee may find it useful to examine another

aspect of the subject in question which was adverted to during the course of examination of the matter by the Air Transport Committee, namely, the legal problems, if any, which might arise in respect of application of the provisions of the Convention relating to nationality of aircraft when an international operating agency gives its own aircraft to a national operator or another international operating agency, or receives from such operator or agency the latter's aircraft, under hire, charter or interchange arrangements.

The Report of the Air Transport Committee is set out below:

PROBLEMS OF NATIONALITY AND REGISTRATION

Air Transport Committee

Study of questions relating to problems of nationality and registration to which attention is directed in the third resolving clause of A2-13

INTRODUCTION

PARAGRAPH 1. The Committee has devoted a considerable amount of time to considering what action Council should take in compliance with the third paragraph of Resolution A2-13. This paragraph reads as follows:

> "That the Council, in accordance with its normal procedures, promptly formulate and circulate to Contracting States its views on the legal, economic and administrative problems involved in determining the manner in which the provisions of the Convention relating to nationality of aircraft shall apply to aircraft operated by international operating agencies."

The Committee believes that this part of the resolution constitutes a request from Contracting States for Council guidance on the problems that they might encounter in connection with aircraft nationality under the Convention when arrangements were made between two or more States to set up some form of international operating agency. The wording of the resolution refers literally only to "problems involved in determining" the application of the Convention, but this would imply a purely procedural study, and the Committee believes that the second session of the Assembly did not intend this, but was really interested in the practical aspects of the problem. The Committee wishes to make it clear that the isolation of this part of the study does not in any way prejudice continued action on the remaining parts of Resolution A2-13 or on Resolution A4-17—that is, the general problems of international (or joint) ownership and operation.

2. There was considerable discussion in the Committee as to the scope of the study called for by this part (paragraph 3) of Resolution A2-13—that is to say, as to the provisions of the Convention and the types of international operating agency that should be considered. The Committee was advised by the Chief of the Legal Bureau of the Secretariat that the phraseology of the last sentence of Article 77 (on which paragraph 3 of Resolution A2-13 is based) could only be interpreted as referring to the provisions of Chapter III of the Convention, which is the Chapter specifically *related* to the nationality of aircraft. Some members of the Committee agreed with this interpretation of Article 77, which would limit the scope of the problem. Other members of the Committee, however, could not accept this as a definitive legal interpretation of the Convention, and observed that neither the last sentence of Article 77 nor the third paragraph of Resolution A2-13 would have had much object if the intention had been so limited as was suggested. In this latter view the real problems, whether legal, economic or administrative, would arise in the application of other provisions of the Convention, the application of which is *dependent* on the nationality of aircraft.

3. The Committee decided to give full consideration to the wider interpretation of the relevant parts of Article 77 and Resolution A2-13, in order to ensure that all the problems likely to be encountered by Contracting States in this field should be explored. The Secretariat was, therefore, instructed not to restrict its study to the provisions of Chapter III of the Convention and to cases of international operating agencies with nationally registered aircraft, but to consider also the wider problems that would arise under other articles of the Convention if an international operating agency were able to operate aircraft registered in some way other than on a national register. The Committee noted that, in all cases of international (or joint) ownership and operation so far established, the aircraft concerned have been registered by one or other of the participating States, and that in consequence no special problems arise out of the provisions of the Convention. For reasons that will be explained, the Committee ultimately reached the conclusion that, even if it were possible to establish some form of international registration, full compliance with the provisions of the Convention would only be possible through the medium of nationally established machinery. Any difficulties which might arise in regard to the registration by a State of aircraft not wholly owned by that State or its nationals are susceptible of solution by the State concerned, and such a solution permits full implementation of the provisions of the Convention. Since the intervention of national agencies would be required for the full implementation of the Convention, the Committee came to the conclusion that there would be no practical purpose in attempting to provide for international registration. The Committee is of the opinion, therefore, on practical grounds, that it is not necessary to attempt to find detailed solutions for the complex technical and administrative problems that would arise, if provision were made, by whatever means, for some form of international registration. In this paper the problems that arise under these varying interpretations are outlined and the reasons for the Committee's conclusions set out.

PART I—THE NARROW INTERPRETATION

National Registration for the Aircraft of International Operating Agencies

4. On the interpretation of the Legal Bureau of the Secretariat that the last sentence of Article 77 relates only to Chapter III of the Convention, it would be possible for the Council to conclude

(i) that normal national registration alone is permissible and that it must be maintained;

(ii) that normal national registration alone is permissible without amendment of the Convention, but that the Convention should be amended to provide for international registration;

(iii) that the establishment of a joint register of aircraft and joint nationality marks and the conferment of joint nationality on aircraft so registered would be in compliance with Chapter III. (Such a determination would open up all the problems arising from other articles of the Convention and it is dealt with in Part II).

5. Should it be decided, in accordance with the second conclusion in paragraph 4, that amendment of the Convention would be necessary to effect any modification of the normal practice of national registration, it would then be necessary to demonstrate, in accordance with the policy adopted by the 4th session of the Assembly (Resolution A4-3), that such amendments had been proved necessary by experience or were demonstrably desirable or useful. The Committee is satisfied that the first is not the case and believes, for the reasons given below, that the other criteria are not demonstrable. In any case, amendment of the Convention would take many years and could

provide no solution to any problems of joint ownership or operation which might arise in the near future.

6. It remains to examine the first of the alternative conclusions in paragraph 4. Apart from the legal interpretation of the phraseology of Article 77, the following arguments seem to point to this conclusion:

(a) Although no Article of the Convention explicitly provides that all aircraft operating internationally shall be registered on a national register, it is clear that the Convention was drafted on the assumption that all such aircraft would be so registered and intended this to be a universal rule. Thus, Article 20 provides that "every aircraft engaged in international air navigation shall bear its *appropriate nationality and registration marks,*" and throughout the Convention aircraft are referred to as *"aircraft of Contracting States"* or in some similar phrase indicating that they have specific nationality conferred by registration according to Article 17.

(b) Up to the present time, joint air transport operating enterprises have in fact utilized aircraft registered nationally, and there does not appear to be any reason why similar enterprises set up in the future could not follow this example. The Convention seems specifically to provide for this arrangement, since Article 17 endows an aircraft with nationality simply according to its State of registration without reference to its ownership or operational control. It is true that under their present laws the majority of States will accept aircraft on to their registers only if those aircraft are owned by their nationals, but such States should be prepared to make an exception in favor of the aircraft of an international agency in which they themselves are interested. If, however, such restrictions prove a real obstacle, the legal ownership of the aircraft could be divided between the participating States, as in the case of the Scandinavian Airlines System. If the national registration of the agency's own aircraft was not possible or desirable for some other reason, it would still be open to the agency to hire or charter aircraft that did have a national registration.

(c) The national registration of its aircraft is undoubtedly a simple method by which international operating agencies can avoid any difficulties in connection with the nationality of their aircraft. If aircraft are registered on a national register, no problems arise under the Convention in connection with their nationality. Such aircraft acquire the nationality of the State in which they are registered, according to Article 17, and the remainder of the Articles of the Convention then apply in the ordinary way. The agency can even change the registration of a particular aircraft from one State to another according to Article 18, so long as no aircraft is registered in more than one State at one time.

7. Even if an international operating agency utilizes aircraft with national registration, however, certain problems may arise in connection with nationality, although not in the application of Chapter III of the Convention. Minor administrative difficulties can, for example, arise in the application of Article 67 (on statistical filing) to any air transport organization where operational control of aircraft is vested in more than one State, since in such cases it is not always clear which State is responsible for filing the relevant statistics with ICAO. Such difficulties have already been encountered, but so far have been easily solved with the cooperation of States concerned. Other difficulties might arise with international agreements other than the Convention, but these are not relevant to the present study. Substantial difficulties might arise if any Contracting State or States wished to participate with a non-Contracting State in a joint international operating

agency, but while this does not appear to have been contemplated under Article 77, there is no specific provision in the Convention against such an arrangement, so long as the aircraft are registered in a Contracting State.

PART II—THE WIDER INTERPRETATION

International (or Joint) Registration for the Aircraft of International Operating Agencies

8. The wider interpretation of the last sentence of Article 77 of the Convention assumes that the Convention actually gives power to the Council to determine that the relevant provisions of the Convention apply to the aircraft of international operating agencies (of Contracting States) if such aircraft are registered in some way other than nationally, and therefore have some status other than simple national status. As indicated above, the Convention does not explicitly prohibit the operation of aircraft so registered. Moreover, as stated in para. 2 above, the last sentence of Article 77 would have little or no meaning if it did not empower the Council to do something which is not already specifically done by the Convention itself. That such may have been the intention of the signatories of the Convention may be deduced from the fact that the Chicago Conference devoted time to the consideration of international status for airlines and their aircraft, and, while not accepting the concept for application at that time, directed the Council to continue the study (in Article 55 (d)) and in consequence to take some action (Article 77). It should also be said that the Chicago Conference had actively in mind the suggestion of a single world corporation (or at least a number of regional corporations embracing many States) for the operation of the world's international air transport. Such a corporation or corporations might themselves be constituted extra-territorially, and therefore have no single nationality. The concept of international registration of aircraft would naturally arise in connection with such a corporation. In this connection there may be recalled two specific proposals for coordinating European air transport that were brought before the Council of Europe in 1951. One (the Sforza Plan) envisaged the establishment of a European Air Syndicate which would be responsible to a Joint Supra-National Authority for all operations in the European Air Space, and the other (recommendation of the Committee on Economic Questions of the Council of Europe) contemplated "an association of airline companies to take charge of air communications between member States." The Council of Europe made a preliminary examination of these proposals and subsequently decided, with these ideas and other considerations in mind, to invite ICAO to convene a conference on the coordination of European air transport, now established as the ECAC. The proposals referred to here have not been pursued, but they are of interest to this study since the type of organization envisaged might well have raised the question of international registration.

9. While, in the absence of a unanimous view, a determination of what the Council was empowered to do might take as long as the amendment of the Convention, it is desirable to set out the possible alternatives and their consequences. In the widest interpretation, the Council would have the responsibility of deciding how each Article of the Convention that refers to aircraft having the nationality of a Contracting State should be complied with in the case of an aircraft having some kind of international status. Within the restricted interpretation that Chapter III only is involved (*vide* para. 4(iii) above), Council might determine that some form of joint registration (elaborated in paragraph 10) would be the equivalent of national registration. In this case, equally with the first, the practical problems of compliance with the sundry relevant provisions of the Convention would arise.

10. The Committee examines a number of possible alternative agencies for international registration. Noting that the State of registry of an aircraft has certain responsibilities under the Convention which can only be fulfilled by a sovereign State or States, the Committee found that it would not be possible for the operating agency itself to be recognized as a registration authority, and for similar reasons found IATA an unsuitable body. While not open to precisely the same objections, the Committee did not consider it practicable that ICAO itself should be constituted as a registration authority. However, such a solution might be justified in theory, there would be many practical difficulties and objections. There remained the possibility that the Contracting States whose airlines form an international operating agency might jointly assume the responsibility of registration and the consequent responsibilities deriving from the Convention. The Committee noted that some States which have established joint operating agencies have established, in parallel, Councils of States' representatives to deal with those matters of policy and administration that are the concern of Governments. Such organizations could conceivably be used to perform the functions of registration and to undertake, on behalf of the Governments, such of the other related responsibilities as might be committed to them. Such an arrangement for joint registration by an agency of the particular Governments concerned, with corresponding joint nationality marks and joint nationality status for the aircraft, appeared to be the only practical approach, if any form of international registration were to be established.

11. While it would entail considerable study to determine exactly how each relevant Article of the Convention should be complied with in relation to internationally registered aircraft, whether for the purpose of amendment of the Convention or for the purpose of application of a determination under Chapter III and Article 77, it is possible to examine the broad effects of such action sufficiently for the present purpose. Broadly, the relevant provisions of the Convention may be divided into two categories, those which confer some right or privilege on the aircraft of Contracting States in the territory of others, and those which impose an obligation or responsibility on the aircraft or on the State of registry.

12. In the first category, subject to satisfaction of the conditions imposed by the articles in the other category, there seems no reason why Contracting States should object to granting the same rights and privileges to aircraft jointly owned in and registered by a group of two or more other Contracting States as they now grant under the Convention to aircraft registered in any one other Contracting State. The major provisions of the Convention in this category are:

Article 5—Right of non-scheduled flight
Article 7—Cabotage
Article 9—Prohibited areas
Article 11—Applicability of air regulations
Article 15—Airport and similar charges
Article 16—Right of search
Article 24—Customs duty on aircraft, fuel, oils, etc.
Article 26—Investigation of accidents
Article 27—Exemption from seizure on patent claims
Article 33—Recognition of certificates and licenses
Article 35—Right of restriction on carriage of certain articles

Most of the Articles cited confer some privilege on aircraft of other Contracting States; others provide for equality of treatment in the conferment of privileges; while Articles 7, 9, 11 and 35 (and Article 16 inferentially) provide for equality of treatment in the withholding of privileges or in the imposition of restrictions. Except for Article 33 which, both inferentially and specifically, is linked with the fulfillment of conditions by or in respect

of the aircraft, no practical difficulty would arise in giving effect to these provisions of the Convention equally as between nationally registered aircraft and aircraft internationally registered by a group of Contracting States—if a policy of permissive international registration were adopted by the Organization.

13. Some of the Articles in the second category (*vide* para. 11) impose obligations directly on the aircraft of other Contracting States, and these would give rise to no particular practical difficulty if applied to internationally registered aircraft. Others, however, impose an obligation on the State of registry, and examination of these shows that in most, if not all, cases practical considerations would dictate the use of national technical and administrative machinery to ensure compliance with the Convention. This fact leads to the conclusion that little if anything would be achieved by international registration. The major Articles in this category are examined below:

Article 10. Landing at customs airport

The obligation is placed directly on the aircraft.

Article 11. Compliance with air regulations

The obligation is placed directly on the aircraft.

Article 12. Rules of Air

The State of registry has the obligation to ensure that its aircraft comply with the rules of the air in force, and to prosecute offenders. A similar inferential obligation on the State of registry might be read into Articles 10 and 11. The ultimate action to enforce compliance would require resort to national judicial machinery.

Article 21. Report of registrations

This Article could be complied with by any organization established by a group of Contracting States to register its aircraft. The ultimate responsibility for compliance would rest on each one of the Contracting States constituting the group.

Article 29. Documents carried in aircraft

The obligation to carry the prescribed documents is placed directly on the aircraft. There is an implied obligation on the State of registry to ensure compliance, and, in the case of internationally registered aircraft, this would fall on each of the Contracting States concerned.

Article 30. Aircraft radio equipment

Article 31. Certificates of airworthiness

Article 32. Licenses of personnel

The obligations imposed by these Articles on the State of registry in all cases involve technical processes of examination and inspection, requiring the services of high grade and in most cases elaborate technical organizations to ensure compliance with the standards on which licenses and certificates are issued or renewed. It is impossible to suppose that such organizations would be established independently by a group of Contracting States for the purpose of regulating the operations of any international operating organization they might establish. In practice, it is inevitable that the responsibilities would be undertaken by the national technical and administrative machinery of one or other of the group of States, exactly as would be the case in respect of their own nationally registered aircraft.

Article 38. Implementation of International Standards

The obligation to comply with International Standards adopted by the Council of ICAO, or in the alternative to file a notification of differences, rests (in the relevant cases) on the State of registry. Compliance usually involves the promulgation of regulations having legal force under the laws of the State. The recognition of international registration would, it ap-

pears, at the least, involve legislation by each of the States involved to make its laws and regulations applicable to the internationally registered aircraft in which it was concerned, and to ensure uniformity of its regulations with those of the other States party to the arrangement. The designation of one of the States party to the arrangement to fulfill all the functions and to apply its laws to the aircraft in question would leave nothing but the name of "international registration" and would be a negation of principle.

At the 15th meeting of its 11th Session on 5 December 1950, the Council adopted an amendment to Chapter 3 of Annex 6 (Operation of Aircraft) which specifically emphasized the responsibility of the State of registry under the Convention and the Annex, in the case of aircraft operated by joint operating organizations. The text of this is reproduced below.*

Article 67. Filing of reports and statistics

Compliance with this Article, which is an obligation normally falling on the State of registry, is a matter of administrative arrangements which would give rise to no real practical difficulty in the case of internationally owned aircraft, even if they were jointly registered. The obligation would remain individually and jointly on the Contracting States concerned.

Article 77. Assessment of Joint Support expenditure

No practical difficulty would arise in assessing Joint Support contributions proportionately to the States participating in an international airline, if their aircraft were registered internationally. Such assessments have been made in the case of the Scandinavian Airlines whose aircraft are nationally registered.

14. The provisions of Chapter XVIII on the procedure to be adopted in connection with the settlement of disputes might be considered to raise a special problem with respect to aircraft not nationally registered. It was pointed out in Committee that the study of this problem would be difficult until the general problem of the legal status of aircraft operating internationally has been resolved. Any definition of the existing legal status of aircraft might or might not be affected by the adoption of international registration with the concept of joint nationality. The Committee believes, however, that since Chapter XVIII is operative in the event of disagreement between two or more Contracting States, its provisions would be operative as between any one or more of the States constituting an international operating agency and any one or more of the other Contracting States of ICAO, irrespective of whether the aircraft involved were internationally registered or nationally registered.

15. It appears to the Committee from this examination of the Convention

* Text of note introduced at the head of Chapter 3 of Annex 6 by Council action on 5 December 1950:

"*Note.* The Convention specifies, in a number of respects, the fundamental responsibility of a Contracting State for aircraft of its nationality. The responsibility of a State of registry is further expanded in this Annex. Methods of discharging such responsibility may vary among States but no particular method can in any way relieve the State of registry of its basic responsibility. Subject to this basic responsibility, nothing in this Annex prevents—

(a) in the case of an aircraft being chartered and operated by an operator having the nationality of a Contracting State other than the State of registry, the latter State delegating to the former State, in whole or in part, the exercise of the functions imposed by this Annex; and

(b) in the case of international operations effected jointly with aircraft not all of which are registered in the same Contracting State, the States concerned entering into an agreement for the joint exercise of the functions placed upon the State of registry by the provisions of the Annex."

tion, would directly raise any fresh economic problems or have any direct economic results. The possible savings in operating costs by joint operation and the possible improvement of the revenue position of the operators by reduction of competition and improvement of load factors are elements in the more general problem of international or joint operation, uninfluenced by the nationality of the aircraft. Likewise the new problems of taxation which might arise are likely to be related to the status of the corporation operating the air services (*i.e.*, whether nationally or internationally incorporated) rather than on the nationality of its aircraft.

PART III—SUMMARY OF CONCLUSIONS

16. The Committee concluded:

(1) That an international operating agency cannot itself be charged with the responsibilities of a Contracting State under the Convention in reference to its operations, and could not, therefore, become the registration authority for its own aircraft.

(2) That for similar reasons the International Air Transport Association could not be charged with the registration of aircraft.

(3) That neither ICAO nor any other existing organization could appropriately be charged with the responsibilities falling on Contracting States as States of registry.

(4) That, even were it found possible, no effective purpose would be served by two or more Contracting States that have set up an international operating agency, establishing a joint registration authority and arranging for aircraft to bear the joint nationality of the participating States.

(5) That, while there was divided opinion on the legal interpretation of Article 77 in relation to Chapter III and other relevant provisions of the Convention, the conclusion that no practical purpose would be served by any kind of international registration (see sub-paragraph (9) below) made it unnecessary to secure an authoritative interpretation of the Convention on this point.*

(6) That if a policy of permissive international registration were to be adopted by the Organization, no pronounced practical difficulties would arise in the implementation, in relation to internationally registered aircraft, of those provisions of the Convention which confer privileges on the aircraft of other Contracting States or ensure equality of treatment of the aircraft of all Contracting States or which impose obligations directly on the aircraft of other Contracting States.

(7) That the practical difficulty of compliance with those Articles of the Convention which impose an obligation on the State of registry of aircraft operated internationally, if aircraft were internationally

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* It is the opinion of the Legal Bureau that there is not sufficient justification to consider that a "determination" by Council under the last sentence of Article 77 is legally binding upon the Contracting States to the same extent as the provisions of the Convention itself.

The authority of a "determination" arrived at under the last sentence of Article 77 will then rest upon the form of Council action depending on the status given to it by the Council itself. The possibilities would seem to be a resolution of the Council, a recommendation of the Council, or perhaps standards and recommended practices adopted under the annex procedure where appropriate. The last possibility would have the advantage of imposing on States the obligation to file deviations in case of non-compliance. In all cases it will have to be borne particularly in mind that any determination arrived at must avoid conflict with any Articles of the Convention such as the provisions of Chapter III.

This opinion and the conclusions arrived at are independent of whether the "narrow" or "wider" interpretation of Article 77 is applied. The force of the arguments may, however, be more strongly felt under the "wider" interpretation.

registered, would be such that those obligations would have to be undertaken by one or more of the Contracting States constituting the international operating agency and through the medium of their own national legal administration and technical machinery.

(8) That the last sentence of Article 77 of the Convention appeared to contemplate the possibility of an international operating agency involving many if not all States, and there appears no practical prospect of such an organization coming into existence in the foreseeable future. The only international operating agencies so far constituted comprise no more than three States, and it appears probable that any developments in this direction will be of the same nature. In spite of the fact that the majority of national laws restrict registration of aircraft to those owned by nationals of the State, the only practical solution seen by the Committee for the registration of aircraft owned by such an international operating agency is national registration of the aircraft under the laws of one or other of the participating States. No objection in principle should be raised by the States participating in such a joint international operation to modifying their laws of registration to the extent required for this purpose.

(9) That for the reasons given no practical purpose would be served by pursuing at this time the investigation of the alternative possibility of international registration of aircraft.

(10) That such economic problems as may be caused by international ownership and operation do not arise from the application of the Convention in relation to the nationality of aircraft.

This subject—problems of nationality and registration of aircraft operated by international agencies—figures at the present time as Item No. 8 on the Provisional Agenda of the ICAO Legal Committee which is due to hold its Eleventh Session in Tokyo, Japan, in September 1957.

II. INTERNATIONAL AIR TRANSPORT ASSOCIATION

13th ANNUAL GENERAL MEETING, MADRID, SPAIN SEPTEMBER 9-13, 1957

The 13th Annual General Meeting of the International Air Transport Association was held in Madrid, Spain, at the Instituto de Prevision, between September 9-13, 1957.

Dr. Tomas Delgado, President of the Spanish Airline IBERIA, succeeding Lord Douglas of Kirtleside, Chairman of British European Airways, presided over the meeting.

Sir William P. Hildred, Director General, delivered his annual report to the meeting. The main preoccupations of the meeting were in relation to the forthcoming introduction of new turbine-powered aircraft; the proposed introduction of new low fare services on important world routes; and the effects on the airline economy of rising costs of operation.

IATA LEGAL COMMITTEE

The Legal Committee of IATA held its 20th Meeting in Estoril, Portugal, between September 2nd/5th, 1957, prior to the Annual General Meeting of IATA.

The following is a summary of the Report which was prepared by the Legal Committee, and which was presented to the Annual General Meeting by Mr. W. A. Steenstra-Toussaint, KLM Royal Dutch Airlines, The Hague:

Hire, Charter and Interchange of Aircraft

The IATA Legal Committee report considered at length the legal problems arising out of the hire, charter and interchange of aircraft in international service, within the context of the Chicago Convention, which deals with the licensing of aircraft and of crews, and the Warsaw Convention affecting the liability of air carriers.

The Committee concluded that the Chicago Convention contains a framework which should permit the handling of leases without crew, as well as leases with crew, whether on a term basis, a voyage basis, or in interchange, and that it would be unwise to attempt to amend the Convention in this regard—at least unless and until further experience should demonstrate greater need for this than had yet appeared.

The Report stated that certain practical problems might arise out of occasional requirements of individual governments, particularly with respect to the lease of aircraft without crew, but held in general that these could best be dealt with on a practical basis with the government concerned or at most by bilateral or regional arrangement. The Committee outlined several situations which might arise in this respect and suggested possible practical solutions for each one.

Reviewing the subject under the terms of the Warsaw Convention, the Committee agreed that there were no problems arising out of leases of aircraft without crew which would require any amendment of the Convention. Some questions might arise, but the Committee was of the opinion that these could probably be covered by the insertion of suitable indemnity provisions in lease agreements.

Lease of aircraft with crew by one airline to another created no particular problems as long as the normal transportation documents were used as they should be.

The Committee felt, however, that the position was more difficult in the case of lease of aircraft with crew to an entity other than an airline which resold the space. Where such a lease was for the carriage of passengers, any questions as to the liability of the airline as a lessor might be settled by insisting on the issuance of tickets to passengers carried under a charter agreement, since this would automatically put the transport concerned under the rule of the Convention.

The situation appeared to be somewhat different in cases of lease of aircraft with crew for the carriage of cargo. In such cases, the shipper would hold the air waybills of the lessee or forwarder, and not those of the leasing airline. Thus, the owner of the aircraft would not have the protection of the limits of liability of the Warsaw Convention which he enjoyed when carrying cargo under his own waybill, and might therefore be open to suit by shippers directly in tort and without limitation. A contract between the lessor airline and the forwarder or other lessee might not in itself effectively extend the Warsaw Convention to the lessor, so presumably such extension would also have to be included in the transportation documents issued by the forwarder.

Under the circumstances, the Committee concluded that there were situations which might not satisfactorily be resolved under the present Convention. A "treaty solution"—*i.e.*, amendment to the Warsaw Convention, which has already been proposed in ICAO, might be advisable.

However, the Committee pointed out that governments already have before them for ratification a number of amendments contained in the new Hague Protocol and their approval of these might be delayed if still more amendments are put forward now. The Committee therefore suggested that any attempt to amend the Convention by a further protocol dealing with charter questions should be deferred until after the Hague protocol has been ratified.

Until that time, notwithstanding some difficulties, air carriers are able to perform carriage on the basis of charter agreements, as well as interchange of aircraft.

The report went on to suggest and discuss certain changes which might be made to the Warsaw Convention by a new protocol and said that these and other points will be further studied by a special Sub-Committee on Hire, Charter and Interchange headed by M. Maurice Lemoine (Air France).

Draft Convention on Aerial Collisions

The IATA Committee expressed the hope that the completion of a convention on Aerial Collisions would be expedited by the ICAO Legal Committee through which governments are now considering this subject. Recent recommendations by the ICAO Air Transport Committee as to the limits to be placed on carriers' liability in the event of collision might facilitate an early agreement on the principles to be incorporated in this convention, the Legal Committee report stated.

Legal Status of Aircraft and Aircraft Commander

Reporting on ICAO's consideration of these subjects, the Committee reiterated IATA's stand that there is no urgent necessity for a convention to define the authority of the pilot-in-command in relation to offenses committed in an aircraft in international flight.

The Report pointed out, however, that in ICAO's study of the legal status of the aircraft, experts in that organization have considered that some provisions affecting the exercise of certain powers by operators and aircraft commanders should be included.

Traffic Documents

The Committee pointed out that, with the adoption by the Traffic Conferences of new Conditions of Contract on the Passenger Ticket, effective from March 9, 1957, certain questions were bound to arise as to their effect on the carriers' General Conditions of Carriage and Tariffs as filed with governments. The Committee therefore advised that individual carriers examine these documents in the light of the new Conditions of Contract.

A special committee, headed by IATA's Legal Adviser, Professor John C. Cooper, which had worked out these new Conditions of Contract for passengers, is now undertaking a revision of the standard Air Waybill Conditions of Contract, with a view to preserving its universal and uniform character.

IATA TRAFFIC ADVISORY COMMITTEE

The following is a summary of the Report which was prepared by the Traffic Advisory Committee, and which was presented to the Annual General Meeting by Mr. Gordon M. Bain, Vice-President of Northwest Airlines:

Charters

New proposals to the existing rules governing charter traffic will be put to the IATA Traffic Conferences at Miami Beach by a Special Charter Study Group after two years of discussion.

The draft is the latest attempt to resolve a problem which has been made difficult and troublesome by a basic conflict in philosophy, between strict and precise regulation designed to preserve the fare structure of scheduled operations, or more liberal regulations to give members greater freedom to meet non-IATA, non-scheduled competition.

Reservations

The Miami Conferences will also be asked to vote on a proposed new cure for the "no show" problem, which is costing the international airlines an estimated $29,000,000 a year.

These losses accrue when passengers who book space and decide not to use it fail to notify the airline sufficiently early to permit the space to be sold to someone else.

The new procedure, recommended by the IATA Reservations Working Group, is based primarily on ensuring that the passenger picks up and pays for his ticket by a fixed time in advance of departure. The proposal follows, but is not identical to, regulations which are already in effect on domestic U.S. air routes.

Pointing out that the airlines have been searching for several years for ways to check their "no show" losses, the report urged that the carriers take positive action on the new proposals. Otherwise they should resign themselves to the fact that if the medicine is too unpalatable, then we must live with the disease.

The "no show" problem is being attacked from another direction by efforts to help travel agents to adhere more closely to the reservations requirements of the airlines. A new "Code of Reservations Procedures" has been drawn up by the Reservations Working Group and, with the support of the International Consultative Council of Travel Agents (ICCTA), will be distributed to travel agents throughout the world later this year.

A certain amount of progress in eliminating space leakage on interline bookings has been made during the past year and interline reservations groups are being formed in cities served by three or more carriers to deal with day-to-day problems in a practical fashion.

The Reservations Working Group is also studying the use of Electronic Data Processing systems for handling reservations. Certain airlines have already begun to employ installations of this type on an on-line basis.

Passenger Handling

Mechanized methods of dealing with on-line ticketing may also point the way to greater simplification of the standard IATA Interline Ticket. For the moment, however, the Traffic Handling and Accountancy Working Group has found it impossible further to streamline the present form, largely because of fare complexities.

In the light of the imminent introduction of faster and larger aircraft, the Group is concentrating on the overall problems of simplifying traffic handling documents and procedures. It has developed faster ways of dealing with "mis-handled" baggage; has proposed a new and improved system for sorting baggage; and has recommended the standardization of public announcements at airports where the public address system is overloaded or where acoustical factors make announcements inaudible or incomprehensible.

Simplification of Fares and Rates

A special Simplification Working Group is presently conducting a study of four alternative means of reducing the complexity of the international fares and rates structure to increase efficiency, eliminate competitive abuses and avoid unnecessary dilution of revenues.

Separate sub-groups are studying alternative approaches to simplification. Meanwhile, the Group as a whole is exploring the possibilities of using mechanical computation equipment as a means of speeding the evaluation of new rate proposals and amendments to rate levels at Traffic Conference meetings and in computing additional fares and rates at post-Conference Construction Working Group meetings.

Air-Sea Interline Agreements

An air-sea interline agreement applicable to North Atlantic traffic has been drafted by a special study group and may be acted upon by the airlines at the Miami Beach Conferences.

Designed to facilitate the exchange of traffic between air and sea, it would still be subject to the acceptance of shipping interests, the report pointed out. If adopted, it might serve as a pattern for agreements between airlines and steamships on other routes as well.

Meanwhile a somewhat attenuated form of the same agreement has been worked out by air and sea carriers over the Pacific, but still awaits actual implementation.

Agency Matters

Proposals by ICCTA for increased rates of commission for travel agents will be considered by the Miami Conferences, which will also have before them several new suggestions to improve the regulations dealing with inclusive tours and tour conductors.

The IATA Composite Agency Committee has recommended a number of other measures designed to ensure the fairest possible treatment of agents, including an arbitration process to deal with appeals by agents who have been cancelled or suspended.

Also under current study are proposals for an industry audit program and for a standard ticket and bank settlement plan for agents, to be applied in the U.S. and Canada.

Cargo Matters

In the field of cargo rating, a study of cargo carriage over the North Atlantic has indicated a number of loopholes in the present rating system. As a result, a number of remedial steps have already been taken by the Atlantic Specific Commodity Rates Board and others may be introduced in the Traffic Conferences.

At the same time, a number of significant improvements have been made in the handling and documentation of air cargo.

A new IATA Interline Cargo Claims Procedures Agreement which will secure and preserve to a greater extent the harmonious relationship in cargo claims matters between the airlines and the public came into effect on January 1, 1957 and has now been signed by 32 carriers. Its purpose is to expedite the investigation and settlement of air cargo claims and to effect prompt and equitable apportionment among carriers of expenses incurred in their settlement.

The Traffic Handling and Accountancy Working Group has recommended the adoption of an improved and simplified Cargo Waybill and has gone on to study the possibility of the complete elimination of cargo manifests, as well as further standardization of other documents.

The IATA Regulations Relating to the Carriage of Restricted Articles, which has been completely revised and brought up to date, has now been made part of the Official Air Navigation Orders of a number of governments and are being considered for application to other forms of transport as well.

Currency Matters

New draft resolutions governing currency exchange rates in relation to fares and rates have been drafted for the Conferences by a special working group. The report stated that the proposals appeared very much simpler than the present regulations, and, if accepted, would certainly save carriers a number of headaches in future.

Helicopter Fares

The Miami Conferences will also have before them recommendations by a special working group on the integration of helicopter fares into the general IATA fare pattern. The report pointed out that this process might sound an extremely simple affair, but difficulties might arise where the helicopter performs functions elsewhere undertaken by the airport coach service, and also when it operated in an area where fares by fixed-wing aircraft have been common-rated.

Miami Conference

The report emphasized that everything possible has been done to assure that the proposed North Atlantic "thrift" fare should have adequate consideration before coming to the Conference floor. Since the proposal was first made at the Cannes Traffic Conferences in 1956, it has been studied and discussed by a special meeting of the carriers concerned, by a panel of engineering experts, by the Conference Cost Committee and by the preparatory Fares, Rates and Charges Sub-Committee.

There still remains a great deal to do at the Conference and it is hoped that all delegates will come to Miami very full of the desire to reach agreement quickly and equally full of readiness to compromise.

IATA TECHNICAL COMMITTEE

The following is a summary of the Report which was prepared by the Technical Committee, and which was presented to the Annual General Meeting by Captain Anselme V. J. Vernieuwe, Sabena Belgian Airlines, Brussels:

General Observations

One of the principal preoccupations of the joint technical activity of the airlines at this point is the international replanning and reorganization of the world's air routes which the advent of turbine-powered equipment requires.

IATA has concentrated during the past year on the analysis of the characteristics of turboprops and turbojets, to determine what air navigation facilities and services will be needed if the airlines are to operate these extremely costly vehicles at their maximum efficiency.

IATA is endeavoring to indicate, as early and as clearly as possible to the agencies which must provide these facilities and services, what the essential requirements of turbine equipment will be and how they will differ from those of conventional aircraft now in use.

The latest step in this process has been the development by a special IATA Turbine-Powered Aircraft Operations Panel of a reference document on the general principles of these operations, to assist airlines in their own initial planning and to provide advice and guidance to governments, ICAO and other agencies.

This process will be carried further in the IATA Technical Conference at Miami Beach in November of this year when airlines, governments, manufacturers, air forces and others will join in a free discussion of the factors which will affect turbine operations and an attempt to assess their relative value and importance.

Much has been done in determining the requirements of the new era of operations but much more remains to be done if hopes and aspirations for their operation and impact on air transport in general are to materialize.

Noting the continuing pressing need for cooperative technical activity through IATA, the Committee said that the airlines' technical experts had taken part in 35 IATA meetings in the past year called to consider problems of both world-wide and regional nature.

The full recognition now afforded to the advice and guidance available from IATA has steadily increased the demand on the association for cooperation with other organizations. IATA's close relationship and cooperation with ICAO has steadily increased with the quickened pace of replanning and reorganization in the air navigation field; while IATA also maintains close contact with the World Meteorological Organization, the International Standards Organization, the International Telecommunications Union and with airline implementing agencies and the Air Transport Association of America.

Navigation Aids

The Committee asserted that by far the most stringent demands on the accuracy and flexibility of navigation aids now stems from air traffic control, rather than from the need to assist an aircraft to find its way from one point to another.

Air traffic control requirements are twofold: to guide the aircraft through the holding patterns or flight tracks required by the control organization; and to determine the position and progress of aircraft in flight so that control can keep them properly separated.

The actual method of presenting navigational information in the cockpit —for example, in terms of track information, rather than in terms of "fixes" —may be of equal or greater importance than the accuracy of the aid.

Attempts in both IATA and ICAO to establish the true ATC requirement for accuracy in navigational aids have met with only partial success. Intensive effort is necessary to answer the question, since the result is bound to dictate the selection of future aids, help resolve outstanding differences of opinion and encourage implementation.

The prospects of being able to utilize wholly self-contained aids—especially those based on the principles of Doppler radar—in future aircraft are distinctly brighter. The Report noted that their high cost may restrict their initial use to the new turbine-powered aircraft; and that there is clearly a large market for a simpler and less expensive form of navigational aid in short-haul aircraft and helicopters.

Anti-Collision Devices

The Committee reported a wide measure of airline agreement that devices of this type are needed as an insurance adjunct to conventional ground-based air traffic control, but that the airlines are still awaiting practical proposals as the result of studies now being made by manufacturers.

Much attention has been paid to two devices, the proximity warning indicator and the collision avoidance system, the first of which would give warning that another aircraft in the vicinity provided a collision hazard, and the second of which would indicate to the pilot or initiate via the autopilot the type of evasive maneuver required.

While there has been reason to hope that at least the simpler of the two devices could be entirely self-contained and would work regardless of whether similar equipment were carried by other aircraft, it now unfortunately appears that such a simple solution is not technically feasible.

It may therefore be necessary to go to a "cooperative system," which would entail the carriage of some equipment on all aircraft, including military and private machines, and even more in those which are to receive cockpit indications.

A lesser-known device which is also being studied is the aircraft separation monitor, an essentially cooperative system for long, over-ocean routes, rather than relatively high density traffic areas. The airlines are still awaiting specific technical proposals, but if such an aid could be developed, it would permit a transatlantic aircraft to observe its positions relative to all

other aircraft from which it was being separated by ATC and would continuously monitor their positions to assure that established separation criteria were being satisfied.

Secondary Radar

The Committee reported that little notable progress appears to have been made during the last 12 months towards the goal of early worldwide standardization on a system of secondary ATC Surveillance Radar to increase the assurance of correct aircraft identification and improve operational radar coverage under adverse weather conditions.

However, the Committee were extremely hopeful that governments which have been concerned with the technical development of this system and who have been working closely together will be in a position to make firm equipment proposals to ICAO during the Sixth Session of the ICAO Communications Division which convenes on September 9.

Communications Services

The conclusions of the ICAO Communications Division Meeting will undoubtedly guide all important developments in the field of communications and navigation for a number of years to come and will very definitely influence to a marked degree the effectiveness with which we can hope to operate the next generation of high speed aircraft.

IATA has prepared and submitted to ICAO detailed recommendations or expressions of airline opinion on the majority of subjects on the Division's agenda, but by far its biggest undertaking in this connection has been the preparation of a single document consolidating the essential principles and practices for radiotelephony network operations.

The swing toward airline use of air-ground voice communications as a replacement for radiotelegraphy has continued and, now that radio-telephony is universally recognized as a preferred communications means, it has been found essential that the organization and procedures to be uniformly used be readily available for training and reference purposes in a single document.

Meteorological Services

The Committee reported a wide degree of acceptance among governments and in ICAO for the principles put forward by IATA that the role of the Meteorological Service is to supply the necessary weather information to the Air Traffic Services and that it is for the latter to disseminate the data in accordance with the needs of aircraft.

As a result of its recent worldwide Air Navigation Conference, ICAO has decided to establish a special panel of representative operational, air traffic service, communications and meteorological experts to review how these principles can be applied to the various ICAO Annexes and Procedures. It is hoped that, in another year, the preferred system for supplying aircraft with weather information will come into service on a worldwide basis.

The report noted highly encouraging results from experiments with automatic reception and recording of weather information in aircraft by the use of teletype or facsimile systems. While the airlines cannot commit themselves to such systems until there has been a great deal more experimentation, they could reduce the cockpit workload of monitoring and recording information, provide an automatic log of weather information, and assure that crew would not miss important parts of voice or code transmissions because their attention was drawn momentarily to other duties.

Licensing Problems

Particularly onerous requirements for familiarizing pilots with specific routes and aerodromes are on the way out, at long last, following the

recommendation of an ICAO Conference for international standards placing upon the operator the responsibility to ensure that crews are properly qualified for the routes and airports into which they may operate.

IATA has opposed the original excessively restrictive and burdensome standards on this subject because experience has quite conclusively demonstrated long ago that the necessity for specific qualifications will vary according to such factors as the experience of the pilot and crew members; the influence of terrain; the similarity of procedures and aids; the reliability of meteorological information; and the probability of difficult weather conditions; the adequacy of aerodrome and route information; and so on.

The newer types of aircraft—and those still to come—possess great operational flexibility and their potentialities cannot be exploited properly if unnecessary legislation precludes fully competent crews from using them to best advantage. Furthermore, certain training techniques are now available that offer advantages, as compared with physical entry into the aerodrome, as a means of indoctrinating a pilot with respect to the configuration and environs of landing areas.

The Committee noted that the most popular of these new techniques, based on the use of wide-screen, color motion pictures, is already in use by several airlines which have found it most effective.

In another field of licensing, the concept of an airline's maintenance and/or overhaul organization being approved as a unit to perform all maintenance and overhaul operations has now received official acceptance within ICAO. This approved organization concept was accepted with respect to overhaul personnel in 1955, and extended to cover maintenance operations last year.

Developments in Approach and Landing

IATA has given serious consideration to better visual aids for approach and landing, particularly because of their importance in the operation of turbine-powered aircraft, whose high fuel consumption at low altitudes makes approach success increasingly important.

At the moment, trials and experiments with certain better aids—many of them along lines advocated by IATA—are proceeding apace in several states, and after the current round of practical investigations and development have been completed, we will see wide scale implementation of improved aids at a rate which we would not formerly have thought possible.

The report pointed out that the "narrow gauge" scheme for lighting the touchdown area of the runway developed in IATA has been recognized at the divisional level of ICAO and is now under intensive, large-scale trial by the U.S. Civil Aeronautics Administration, as well as in the United Kingdom and Holland.

In addition, ICAO has recommended the provision of "fixed distance" markings on all runways at a distance of 1,000 feet beyond the threshold, as a deterrent to undershooting; and has also recommended installation of simplified approach lighting at the end of all runways intended for use at night. In both of these developments, IATA has been a prime mover.

Airport Buildings and Aprons

With the growth in airline traffic, problems on the airport itself have become increasingly acute. The introduction of turbine-engined aircraft has given promise of further complications.

Today at our airports we are faced with the classic problem of pouring more and more peas into the mouth of a funnel while trying to speed up the rate at which they trickle out the other end—without using a larger funnel.

Our aircraft are getting larger. With as many as 150 passengers soon to be carried by a single aircraft, the means must be found for ensuring a smooth and rapid flow of passengers and baggage through the terminal on to the aircraft and vice versa.

To fill the parallel requirement for more efficient procedures in ground handling and servicing, which is considered one of the most critical current problems, IATA has issued a new information document to give airport authorities guidance on the type of aprons, layout of stands, degree of fixed servicing facilities, maneuvering of aircraft, etc., which the airlines require.

This publication, now in its second edition, will be revised in the light of further studies into turbine equipment operation.

In return the Technical Committee would like to see the local authorities at the airport, the community and the government level combining their resources to tackle the problem of speeding the airline traveler's passage from the moment he leaves the aircraft until he reaches the city center. In company with the airlines, these authorities have a share in the ultimate goal of providing speed, convenience, comfort and safety to the traveling public. We should not lose sight of the fact that this goal applies on the ground as well as in the air.

Airworthiness

The principal development of the past year in this complex field has been general, although not unanimous agreement in ICAO with the IATA viewpoint that a single method of compliance with airworthiness requirements should be the ultimate goal. As matters stand, however, two acceptable methods have been approved for the time being, one patterned after U.K. requirements and the other after those of the U.S.

A continuing program of work on the many facets of airworthiness, ranging from fatigue strength to cockpit visibility, continues through the recently established ICAO Airworthiness Committee, with which IATA maintains close cooperation.

Helicopters

Manufacturers appear to be optimistic about meeting or bettering the basic performance requirements and operating cost targets for multi-engined helicopters developed by the IATA Helicopter Committee. However, the Report warned that while delivery of these larger helicopters is still some time off, there are many questions which must be answered before that time.

Amongst others, there is the problem of the special air traffic control procedures which should be established for helicopters. If the operators wish to forestall national regulations which are based on fixed-wing thinking and ignore the inherent characteristics of the helicopter, they should be ready with their own proposals backed up by the results of investigation and operating experience.

Pointing out that this is exactly the line being taken by the IATA Helicopter Committee, the report of the Technical Committee said that progress of this sort has already been made in connection with heliport requirements, on which IATA's recommendations have been substantially accepted by ICAO.

Regional Affairs

Regional planning and implementation has become increasingly important to the industry and has engaged much of IATA's technical concern during the past year. In particular, IATA has worked closely with the special ICAO Implementation Panel headed by the President of the ICAO

Panel; and the Committee declared that it was essential for IATA to continue to give the Panel its utmost cooperation and best advice.

In the *European-Mediterranean* region, the Committee noted that ICAO has now set the stage for the first large-scale planning attempt next January to provide the services and facilities required to cope with the large number of turbo-jet aircraft to be introduced on Europe's intricate network of air routes. It stressed that this was being done jointly with the military in order to assure effective coordination of all types of traffic.

In this connection, the Committee for European Airspace Coordination, in which IATA participates as observer, provides coordinating machinery of the right type—so long as the proper degree of importance continues to be attached to those interests which are purely civil in character.

In the *North Atlantic* region, a new system of transmitting position reports, originally designed by IATA and now adopted by ICAO, has proved in practice to be a very considerable improvement, and further refinements and simplifications have now been advanced by IATA.

The report asserted, however, that very real air traffic control problems continue to plague us in North Atlantic operations, principally because of the lack of suitable long range navigational aids and the short-comings of present-day communications. One encouraging development toward better communications links between the key operational points of the region, however, is ICAO's endorsement of the VHF Ionospheric Forward Scatter system of fixed communications.

IATA has also established an extensive program of analyses of airline requirements to assist states to develop a realistic plan for service and facilities in the South American-South Atlantic region, which will be considered by ICAO late this year.

Meanwhile, ICAO has already agreed on a new navigational aids plan for the very complex route pattern of the Caribbean region which, it is believed, when implemented, will greatly assist the provision of adequate air traffic control there.

Constant check is being kept on requirements and situations in the South East Asia region, where IATA hopes that ICAO will continue its policy of calling states together informally to discuss their mutual implementation problems. In addition, the Committee is participating in local facilities and planning committees, such as the Aerodromes Consultative Committee and the Communications Consultative Committee established in India.

Future Outlook

Reviewing the conclusions which can be drawn from its study of future operations with turbine powered aircraft, the Committee stated that:

"It is symptomatic of our existing difficulties that the provision of facilities has lagged far behind the planning which justified them and that in many areas air traffic services are not geared to the problem of moving present day traffic with a minimum of restriction.

"Unless there is a big acceleration of effort in these fields, including stepped-up research and increased expenditure of funds, future type aircraft will not only fall short of their potentiality, but will also incur grave economic consequences to the operator in his efforts to give the public improved transportation, in greater comfort and capacity, over longer distances and at higher speeds.

"The turbo-jet's inherent characteristics of high speed, high altitude operation, combined with a fuel consumption which is on an entirely different scale from piston-engined aircraft, bring a number of fundamental changes in the mode of operation and therefore in requirements relating to facilities and services.

"The Air Traffic Controller's problem will be intensified in all phases of flight by the higher closure rates—up to 1200 miles per hour or 20 miles per minute.

"In terminal areas, his problem of coordinating traffic will be especially difficult since he will be confronted with a wide diversity of forward speeds and rates of climb and descent. He requires the best assistance that modern science can produce in order to simplify his problem, improved radar displays, for example, and the use of electronic computers.

"Meteorological and communications services must be extended to cover operations up to 45,000 feet, which is almost twice as high as the operating ceiling of our most modern aircraft today.

"One of the most important aspects will be to reduce drastically the time required to transmit messages on communications channels, particularly from point to point on the surface of the earth.

"More than ever we shall rely on our meteorological friends. They must forecast for entirely different levels of the atmosphere, give us temperatures and winds with increased accuracy, and above all more reliable forecasts of weather at the aerodrome of destination and its alternates.

"We have found that many of the future needs of jet aircraft also exist in one form or another today and will merely become intensified with the introduction of jet aircraft—adequate approach and runway lighting for example, the need for reliable high quality communications, the use of surveillance radar, and above all, the need to reduce separation standards which determine the size of the volume of protective airspace around each aircraft."

The report asserted that there has been such erroneous speculation regarding the length of runways which will be required for the jets, and explained:

"The precise length required will depend on a variety of factors of which the most significant will be the length of flight subsequent to take-off. Those aerodromes which are departure points for non-stop, intercontinental flights will indeed require longer runways than exist today to enable the jets to take off at their maximum weights. At the majority of the remaining aerodromes which turbo-jet aircraft will use, aircraft will be taking off at substantially less than maximum weight and will correspondingly require substantially shorter runways.

"It would be surprising indeed if, with our future aircraft, we could expect to carry twice as many passengers at twice the speed over longer stage distances without requiring some extension of runway length. Where administrations are faced with the problem of providing more runway than is currently available, we would ask that this be regarded as part of the price of progress, just as improved forecasting is needed or a better system of long range navigational aids."

IATA FINANCIAL COMMITTEE

The following is a summary of the Report which was prepared by the Financial Committee, and which was presented to the Annual General Meeting by Mr. A. V. Leslie, Vice-President—Finance and Treasurer of Trans World Airlines, New York City:

General Considerations

Faced with the problems of re-equipping for a jet age, the airlines have directed their joint financial activities toward reducing and restricting the mounting tide of operating costs in air transport.

During the past year, the airlines of IATA have been called on to meet the rising costs or the threat of increased charges in virtually every category of their operating budgets—airport landing fees, passenger service

charges, air navigation charges, turnover and other taxes. They have, as well, had to wrestle with such internal problems as interline accounting and currency exchange.

Taxation

In taxation matters the Committee expressed its concern over the amount and extent of taxation on the gross receipts of the airlines. Through the IATA Taxation Sub-Committee, and in co-operation with the International Chamber of Commerce and the International Chamber of Shipping, the airlines have given their support to a resolution recommending the elimination of this form of taxation. These efforts have the support of the International Civil Aviation Organization, but they have borne little fruit to date.

On the other hand, the airlines have secured the agreement of the Government of France to exempt carriers from payment of a recent levy on cargo, the report stated. However, it expressed anxiety over the imposition by Austria of turnover taxes on international passenger traffic.

The report stressed that IATA's efforts in this regard are not set up to avoid taxation as such, but to seek fair and equitable means of dealing with various taxation problems and to ensure that their incidence is non-discriminatory.

Airport Charges

The Committee also emphasized its concern over the trend toward increasing airport charges asserting that these charges, if continued, could have a serious effect on the already parlous financial status of the airlines. Increases in the scale of landing and other airport fees have ranged from 20 to 75 per cent over the past year.

Similar anxiety was expressed at the possibility of certain governments imposing passenger service charges at airports.

The Committee reported that technical and financial experts in both IATA and ICAO are studying the implications of charges for international route air navigation facilities.

Insurance

The Committee pointed out the difficulties created when a government requires a foreign carrier operating in its territory to obtain insurance locally instead of accepting a certificate from the carrier's insurers that its liability is fully covered. This practice, if carried out to any degree, would materially increase the cost of insurance.

The airlines have agreed to support a resolution on freedom of transport insurance shortly to be considered by the General Agreement on Tariffs and Trade (GATT). In it the contracting parties to GATT recommend to governments that they avoid transport insurance measures which restrict international trade, that they reduce any such restrictions which do apply and that they strive to eliminate them.

IATA members not already partners to the Association's Interline Cargo Claims Procedures Agreement were asked again to consider joining in its benefits for the settlement of claims. The Committee pointed out that these benefits increase directly with the increase in the number of participants in the plan.

The Clearing House

The Committee reported on the record of financial settlements through the IATA Clearing House at London, which completed its first ten years of operation in January, 1957. In a post-war world suffering from the hindrances of exchange control restrictions to travel and transport the operation of this most important IATA service has more than proved its worth.

Clearing House membership had increased from 19 in 1947 to include

all but 16 of IATA's 75 member airlines at the end of 1956. In addition, it has provided international two-way clearance facilities for 18 non-IATA members of the Airlines Clearing House, Inc., in the United States. Total two-way turnover of clearances during the 10-year period exceeded $2,235,000,000—accomplished with cash settlements totaling $291,000,000. Compared with an average offset of credits against debits of 64 per cent in its first year, the offset average during each of the last five years has been close to 90 per cent.

Speed of clearance of accounts through the Clearing House has been almost doubled since 1947, so that clearances now are settled within 40 days on the average. The value of the Clearing House in protecting creditors during the periods of currency devaluation since World War II was further stressed.

The report stated that, in respect of all their pre-devaluation charges, Clearing House members, as creditors, had received their settlement free of any exchange loss.

In 1956, inter-clearance arrangements with the Airlines Clearing House exceeded $20,000,000. This total was almost equally divided between the two organizations and the service achieved an average offset of 95 per cent.

Thanks to the increase in turnover and in the numbers using the service, the costs of maintaining the Clearing House—50 per cent higher than during its first year of operation—have been met by steadily decreasing charges to members. Charges per $1,000 of gross receivables have dropped from 51 cents in 1951 to 19 cents last year; the cost to an airline now of collecting the settling $1,000 worth of credits or debits from all over the world without correspondence, application or delay is less than .02 per cent.

IATA/ATA Interline Accounting

The efforts of IATA and the Air Transport Association of America to develop a system of settling interline accounts by means of a sampling process have progressed satisfactorily.

The clerical labor involved in checking and settling interline transactions is tremendous, and the savings which will accrue from a workable sample arrangement are of a high order.

The sampling processes carried out by IATA in Europe and by ATA in the United States differ somewhat in method, but both are designed to establish the extent of the airlines' commercial indebtedness to one another by evaluating sample portions of the bulk of flight coupons—the airline records of their interline transactions—rather than by checking every coupon.

Both systems are new and are undergoing revisions which should be completed before any steps are taken to standardize them.

Travel Agents' Bank Settlement Plan

The Committee deferred its opinion on the financial advisability of proposals to establish a Travel Agents' Bank Settlement Plan to simplify procedures for settling travel agents' accounts with the airlines until it has been reviewed at its next meeting. Under the plan—which has been proposed as a project to be undertaken jointly by IATA and ATA—reports and remittances from travel agents would be made to designated area banks instead of to individual airlines as is done at present.

Monetary Exchange Rates

A greatly simplified but workable solution to the complications of international exchange rates that have plagued the airlines industry during the past 10 years has been offered by a Joint Traffic and Financial Working Group.

In a broad sense the plan—with provisions for regional variations—would in some cases restrict the payment of fares to specified currencies in particular areas in accordance with the pre-arranged regulations for determining the rates of exchange. Provision would be made for local panels to review exchange rates in certain cases.

In expressing the Committee's approval of the plan the report expressed the hope that the Traffic Conferences would find it acceptable.

III. INTERNATIONAL CHAMBER OF COMMERCE

RESOLUTIONS PASSED BY THE XVIth CONGRESS, NAPLES MAY 6-10, 1957

At its XVIth Congress, held in Naples between May 6-10, 1957, the International Chamber of Commerce passed the following Resolutions:

Taxation of Air and Sea Transport

The International Chamber of Commerce considers that there is a marked tendency towards introduction and increase of taxes levied on the gross receipts from international transport by air and sea. For this purpose, taxes on gross receipts shall mean the taxes that are assessed on and are basically variable with the moneys received as payment for the performance of international transportation services (as distinct from charges levied for specific services rendered other than international transport) and that are collected either because of the mere fact of the receipt of such moneys or because of the actual performance of transports by air and sea.

Such taxes on international transport materially increase its cost, cause inconveniences to travellers and shippers as well as entrepreneurs and thus hamper international traffic and trade.

Such taxation is contrary to the policy of encouraging international trade and reduces the benefits to be derived by reciprocal exemption from income tax on profits of international transport.

The International Civil Aviation Organization during the session of its Council on 4th October 1951, passed a resolution to the effect that each Contracting State should eliminate or reduce to the fullest possible extent taxes on the sale or use of international transport by air.

With the same end in view, the ICC recommends:

—that taxation of gross receipts from international transport by air and sea be eliminated and.

—that exemption from taxation of gross receipts from such international transport should not be denied because of the absence of reciprocity.

Revision of the Warsaw Convention

The International Chamber of Commerce places on record its appreciation of the sympathetic hearing which its representatives received from the Diplomatic Conference called to revise the Convention for the Unification of certain Rules relating to International Carriage by Air, signed in Warsaw in 1929.

It is glad to note that the Protocol adopted in The Hague in September 1955 by the Diplomatic Conference has clearly taken the recommendations of users into account.

On behalf of users as well as of carriers, the ICC therefore calls upon governments to ratify the Protocol signed in The Hague with the least possible delay.

Air Sovereignty

The International Chamber of Commerce, whose essential aim is the expansion of international trade and thus the free circulation of persons

and goods, has noted with satisfaction the resolution adopted at Dubrovnik by the International Law Association (ILA), laying down the principle that the social and economic needs of the international community are best served by the most extensive international air communications possible.

From the transport user's point of view, the ICC cannot but support this principle and urges, with the ILA, that, in this truly international spirit, commercial rights be granted to foreign companies and that governments, which have not already done so, sign without further delay the Air Services Transit Agreement, under the terms of which each State grants Contracting States the right to fly across its territory without landing and the right to land for non-traffic purposes.

Liberalization of Non-Scheduled Services

The International Chamber of Commerce welcomes the agreement which was reached by the first European Civil Aviation Conference in Strasbourg in November 1955, on the conclusion of a multilateral agreement on commercial rights for non-scheduled services in Europe.

It is experience which has shown the ICC that the characteristics of non-scheduled air transport require a large amount of freedom for the operator to meet the wide variety of demands of the clientele in this field.

The multilateral agreement can form a valuable contribution not only to a greater uniformity but also to a greater liberalization of the regulations governing non-scheduled flights.

In this respect, the ICC urges governments to ratify the agreement as soon as possible and to give a liberal interpretation to its provisions, at the same time continuing their efforts to further liberalize this important mode of air transport.

The Hire, Charter and Interchange of Aircraft

The International Chamber of Commerce has noted the studies which are currently being made to improve the possibilities of hire, charter and interchange of aircraft between airlines as a means to rationalize European air transport. The ICC is of the opinion that these arrangements can benefit the users of air transport by increasing the available transportation facilities.

The ICC therefore urges governments to give their full cooperation to promote the efforts made by the airlines in this direction, *i.e.*, by making adequate provisions for the maintenance of the usual liabilities of the carriers involved and for an easy transfer from one government to another of the responsibilities under the Chicago Convention for the operations concerned, if required.

Air Transport and the Common Market

On various occasions the International Chamber of Commerce has given its views with regard to the different aspects of the integration of Europe. In its statement concerning the Common Market (Resolution 11) the ICC made an exception for air transport, saying that as far as air transport is concerned, integration would not seem to be suitable.

With regard to the recommendations concerning air transport, made in the report of the Heads of Delegations to the six Foreign Ministers of April 1956, the ICC also wishes to draw the attention of the six governments to the following:

Referring to its resolution concerning the International Organization of Transport in Europe, the ICC believes that the creation of new international organizations for civil aviation should be avoided, since the existing organizations—and in this respect mention should be made of the European Civil Aviation Conference (ECAC)—must be considered to be able to handle all

problems in this field. In the ICC's opinion, both operators and users of air services ought to be closely associated in any discussions and no decisions ought to be taken without full consultation with them.

In the same vein the creation of a company for the financing of aircraft equipment might complicate rather than facilitate the rationalization of air transport. The coordination of the purchasing programs of European air transport enterprises should be left to the airlines themselves. The airlines which are in the best position to judge the advisability as well as the feasibility of such coordination should study in mutual consultation the most economic way to proceed in this direction.

By fostering the interchange of aircraft, moreover, the necessary standardization of aircraft will gradually and automatically come about. The conclusion of a liberal multilateral agreement, in the opinion of the ICC, can promote the further development of European air transport, if such multilateral agreement finds the widest possible adherence. With that end in view, the ECAC must be considered as the organization best suited to embark upon such an endeavor.

As regards the possible extension of pooling agreements, the ICC is of the opinion that since the airlines have already successfully brought this method of improving their services into practice, the decision in this respect can and should be left to the airlines.

IV.

TRANSLATION OF CASE TAKEN FROM ASDA BULLETIN No. 1 1957 (P. 13)—ZURICH

Court of First Instance, Geneva: March 26th, 1957
M.D. vs. L.A.I.

SUCCESSIVE AIR CARRIERS—WARSAW CONVENTION—SWISS AIR TRANSPORT REGULATIONS—DAMAGES FOR DELAY—IDEA OF "ETABLISSEMENT"—LACK OF COURT JURISDICTION

Air Waybill No. 198432 dated November 19, 1954, of the Geneva Agency of ALITALIA, establishes the fact that Gondrand Freres S.A. entrusted to the said air transport undertaking four parcels of clothing, one package of ladies' handbags, one package of silk and rayon, one case of clocks, with a total value of Frs. X having, as the consignee, the Plaintiff in Istanbul.

The air waybill stipulated that the carriage would be effected successively by Alitalia as far as Rome, and from Rome to Istanbul by Defendant, L.A.I.

Alitalia, in fact, conveyed the merchandise from Geneva-Cointrin to Rome.

The Defendant, in its turn, transported the parcel from Rome, *not* to Istanbul as requested, *but to Teheran* in error.

Plaintiff brought the action on November 20, 1956, and demanded from the Defendant the payment of Frs. X as damages on account of the error in destination. It should be noted that the action located the Defendant's domicile, as care of Swissair S.A., Hirschengraben 84, Zurich.

At the first session in Court, the Defendant maintained that the Court had "no jurisdiction" (cf, Article 77 LPC). Defendant, basing its argument on the Warsaw Convention of 1929, maintained that the present litigation had, as the cause of action, a contract for air carriage between "various successive carriers" and noted that the Plaintiff wished to summon the last carrier; that, in this case, the last carrier was L.A.I. which had neither domicile, principal place of business, nor establishment in Geneva (Article

28 of the Warsaw Convention). According to the Defendant, its participation had only commenced to become effective from Rome, and, as a result, so far as L.A.I. was concerned, there was no territorial lien whatsoever with Geneva.

Plaintiff declared the non-suit of L.A.I. regarding the incident.

Its argument is as follows:

That the contract of carriage in litigation should not be governed by the Warsaw Convention, because the point of departure, Geneva, and that of the destination, Istanbul, are both situated in countries which have not adhered to the Warsaw Convention.

Only Swiss law is applicable in order to determine the Court in which the action in damages against the Defendant, L.A.I., should be brought. However, Swiss law applies the Warsaw Convention. This treaty, and the Swiss air transport regulations, offer five fora to the Plaintiff in which to raise an action against L.A.I. and notably that of the place in which the foreign air carrier possesses an establishment, by the intermediary of which the contract in this case was concluded.

However, in the case of successive transportation, the first carrier, *i.e.*, the one who concludes the contract, can effectively act on behalf of the last carrier. Inasmuch as Alitalia possesses a Geneva agency, Alitalia's establishment must be immediately identified with L.A.I. which, it must be emphasized, ratified the contract for air carriage, undertaken on its behalf by Alitalia for the journey Rome/Istanbul.

In view of the fact that the Warsaw Convention had been written in French, the Plaintiff considered that the word "établissement" should not be taken to mean "branch," but simply understood to be a "ticket office."

The Plaintiff maintained that to retain the Defendant's argument would be tantamount to making it impossible for the consignee to seek out, in the case of successive carriage, the carrier having effected the carriage—in the course of which the damage had been caused—instead of the place where the contract was concluded. Finally, Plaintiff indicated that in the event of the Court finding itself without jurisdiction, Plaintiff would reintroduce the action before the Courts of Zurich since L.A.I. possesses its legal domicile in that city.

During the March 4th, 1957, session, the parties maintained their arguments, the Defendant admitting the application of Swiss law.

The Court:

The task of the Court is facilitated by the parties from the fact that the actual litigation resolves itself into a question of knowing what must be understood by "établissement" (Article 28 of the Warsaw Convention). However the Court briefly reviews the juridical position:

The two parties recognize that Turkey has not adhered to the Warsaw Convention of October 12, 1929, and that, consequently, the application of the conditions of this treaty are not fulfilled.

Both parties invoke the application of Swiss law. Under the circumstances, it is irrelevant to try and prove that Swiss law is the territorial law with which the contract has the nearest connection (SJ 1952, p. 577; JT 1954m p. 528 ss.). Indeed, the parties can still, even during the action, determine the legislation according to which they wish the dispute to be judged. It is sufficient in this respect that the two parties invoke the same law in the proceedings (SJ 1955, pp. 193 and 305).

As the matter stands, both parties cite the Federal Law approving the Air Transport Regulation, dated December 16, 1952. This regulation, dated October 2, 1952, and effective from February 1, 1953, reverts to the Warsaw Convention. (Articles 2, 3 and 12.) And the Warsaw Convention, in its

Article 1 (3) states: "A carriage to be performed by several successive air carriers is deemed, for the purposes of this Convention, to be one undivided carriage, if it has been regarded by the parties as a single operation. . . ."

Article 30 (1) of the Warsaw Convention states that: "In the case of carriage to be performed by various successive carriers and falling within the definition set out in the third paragraph of Article 1, each carrier who accepts . . . goods is subject to the rules set out in this Convention, and is deemed to be one of the contracting parties to the contract of carriage in so far as the contract deals with that part of the carriage which is performed under his supervision."

In this way L.A.I. can be sought out by Plaintiff because, according to Para. 2 of Article 30: "As regards . . . goods, . . . the consignor will have a right of action against the first carrier, and the consignee who is entitled to delivery will have a right of action against the last carrier, and further each may take action against the carrier who performed the carriage during which the destruction, loss, damage or delay took place." The Defendant was, indeed, the last carrier and it is within the scope of L.A.I.'s service that the Plaintiff considers that he has suffered damage.

In maintaining the competence of the Court, Plaintiff invoked Article 28 of the Warsaw Convention which provided that an action for damages will be brought at the choice of the Plaintiff before the Court . . . of the place where the carrier has an "establishment" and through the services of which the contract has been concluded.

The Court is unable to follow the Plaintiff's arguments regarding the word "établissement."

If the authors of the Warsaw Convention had considered that one should simply understand by that word a "ticket office," they would have authorized a carrier's assignation at the place where the contract for the carriage by air had been created and they would have authorized it expressly. By "établissement," one must understand "industrial or commercial development." (cf. Nouveau Larousse Illustre).

It is the place where a person fixes his residence, the established place of his business . . . whatever the importance of it may be. (Littré page 1509.)

L.A.I. possesses no commercial development in Geneva, within the office of Alitalia's branch. The legal domicile of Alitalia cannot become the legal domicile of the Defendant, as well, for the simple reason that Alitalia created the contract of air carriage, providing therein that, from Rome, the merchandise destined to the Plaintiff would be carried by L.A.I., a company which possesses neither office properly speaking, nor agency nor branch in Geneva.

As the Defendant, in pleading, accurately indicated, the notion of "établissement" is closely tied to that of legal domicile. If the Air Transport Regulation provides in its Article 12(2) that the foreign carrier can designate a legal domicile in Switzerland, at the Federal Air Bureau, it is precisely in order to give to a citizen of Switzerland, suffering damage, the possibility of citing the foreign air carrier, should the said foreign carrier not have a commercial development in Switzerland. It would seem that the Plaintiff has thoroughly understood the problem, since in its writ, it domiciled the Defendant at Zurich, at the address of Swissair where precisely L.A.I. would have fixed its legal domicile in Switzerland.

If in fact, the Plaintiff had considered that the Defendant possessed a Geneva establishment, within Alitalia's offices, it would not have failed to domicile Defendant there in its act of adjournment:

The Court is therefore not competent "ratione loci" and the conclusions of the Defendant are admitted.

JUDICIAL AND REGULATORY DECISIONS

OBSTRUCTIONS TO AIR HIGHWAYS—DUTY OF DISCLOSURE

ALTHOUGH landowners enjoying their property and its immediate reaches[1] have traditionally been protected against flight interference, Congress has created a right of free travel within the navigable air space.[2] Therefore, there are two generally recognized rights which may be in conflict with one another under certain circumstances. It is well established that flight within the navigable air space which does not disturb the existing use of the owner's property is not considered a trespass to the land below.[3] It is also recognized that flight beneath the congressionally defined navigable air space is a trespass when it interferes with the owner's use and enjoyment of his property.[4] Therefore, the landowner is under no duty to exercise care for the protection of pilot-trespassers.[5]

Nevertheless, a serious conflict still exists with respect to flight within the navigable air space which consititutes an interference with the landowner's use of his property. It is in this area that a new facet to the

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[1] Presently, there are four theories by which the conflicting interests of aviators and landowners are adjusted:

a. The "zone" theory divides air space into two zones. The air space contained in the lower zone would be owned by the surface owner and the air above would be left to the flyer. Under this theory, the landowners possessory interest encompasses as much of the space above his land as is essential to its complete use and enjoyment. See U.S. v. Causby, 328 U.S. 256 (1946); Smith v. New England, 270 Mass. 511, 170 N.E. 385 (1930).

b. The "use" theory restricts the landowner's interest to only the space actually used. Hinman v. Pacific Air Transport, 84 F. 2d 755 (9th Cir. 1936).

c. The "nuisance" theory allows the owners to recover in an action for nuisance or negligence only when the flight results in actual interference with the landowner's use of the property. Brandes v. Mitterling, 67 Ariz. 349, 196 F. 2d 464 (1948); Thrasher v. City of Atlanta, 178 Ga. 514, 173 S.E. 817 (1934).

d. The theory presented by the Uniform Law for Aeronautics allows the landowner unlimited ownership of the air space, but subject to the aviator's privileges of flight. The Uniform Law has been enacted in 22 states. See Kuehnl, Uniform State Aviation Liability Legislation, 1948 Wis L. Rev. 356, 357. For a discussion criticizing the "privilege" rather than a "right" of flight, see Green, *Flight of Aircraft—Right or Privilege?* 6 J. Air. L. & Com. 201 (1935).

[2] Section 403 of the Civil Aeronautics Act of 1938, 52 Stat. 980, 49 U.S.C. § 403 (1938), provides that:

"There is recognized and declared to exist in behalf of any citizen of the United States a public right of freedom of transit in air commerce through the navigable air space of the United States."

As defined in this act, navigable air space constitutes the space above the minimum safety altitudes prescribed by the Civil Aeronautics Board, 52 Stat. 977, 49 U.S.C. § 401 (24) (1938).

In determining the applicability of federal air safety regulations to solely intrastate flight, two recent cases have discussed the question of whether federal regulations have pre-empted the field of aviation. In Gardner v. Allegheny County, 382 Pa. 88, 114 A. 2d 491 (1955), it was held that Congress has pre-empted the field in the area above the minimum safety altitudes—thus, within the navigable air space. In Allegheny Airlines v. Village of Cedarhurst, 238 F. 2d 812 (2d Cir. 1956) it was held that federal legislation and regulation constituted a pre-emption of the entire air space, both above and below the minimum safety altitudes.

[3] Hinman v. Pacific Air Transport, 84 F. 2d 755 (9th Cir. 1936); Burnham v. Beverly Airways, 311 Mass. 628, 42 N.E. 2d 575 (1942).

[4] Capital Airways v. Indianapolis Power & Light Co., 215 Ind. 462, 18 N.E. 2d 776 (1939); Smith v. New England, 270 Mass. 511, 170 N.E. 385 (1935).

[5] La Com v. Pacific Gas & Electric Co., 132 Cal. App. 2d 114, 281 P. 2d 894 (1955); Strother v. Pacific Gas & Electric Co., 94 Cal. App. 2d 525, 211 P. 2d 624 (1949); But see Plewes v. Lancaster, 171 Pa. Super. 312, 90 A. 2d 279 (1952).

landowner-aviator controversy is presented, i.e., to what extent is the surface-user under a duty to disclose the exisistence of power lines or other artificial obstructions suspended within the air space above his property.[6]

Such a problem might arise under federal regulations when, as in the case of *Yoffee v. Pennsylvania Power & Light Co.*,[7] a flyer is obstructed by undisclosed power lines while flying above open water or sparsely populated land.[8] Since the otherwise applicable 500 foot minimum safety altitude is dispensed with in such flight, the flyer might be within the navigable air space and still collide with such wires. A comparable situation would arise when a flyer pursuing a normal and necessary glide path during landing or takeoff

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[6] Disclosure would constitute the marking, painting or illumination of structures in a manner which would enable flyers to observe their existence in time to avoid collision. Necessarily, the extent of such illumination would vary with the physical peculiarities of the respective flight areas and should be visible at night as well as during the day.

Although most of the reported cases involve collisions with utility wires, a duty of disclosure should be applicable to all persons erecting artificial structures which might endanger reasonably anticipated flight.

[7] 385 Pa. 520, 123 A. 2d 636 (1956). In this case, the plane had collided with transmission lines which the defendant power company had suspended over the Susquehanna River. Although this situation is distinguishable from the landowner cases since this defendant was an easement holder of the air space occupied by its wires, its significance in the surface user-aviator conflict merits consideration.

In imposing a duty of disclosure upon the power company, the court stated that the mere consent of governmental authorities to span the river was merely the grant of an easement and did not insulate the company from liability for negligence. It was recognized that the rationale supporting the landowner's immunity from duty toward trespassers does not warrant its application to easement holders. A predominant motive for immunizing landowners from all but willful and wanton acts was to protect men of property from appropriation of their possession. However, even assuming that this immunity is a necessary concomitant of our present society, there is little merit in honoring easement holders with a similar privilege since they are not the fee holders to whom the privilege was historically directed. Furthermore, the easement granted to power companies generally consists of the right to erect poles, to suspend wires over a portion of the airspace, and to repair their facilities. Except for this allowance, the landowner has retained virtually the same dominion over this segment of his land as he exercises over the remainder of his property.

Since historically, a trespass is an injury to one in possession of his property, only the possessor's rights are injured by a trespasser. Thus, it would be irrational to allow an easement holder to defend a suit on the grounds that the injured trespasser was engaged in an activity unlawful to a third person.

Although the courts were formerly divided on the question as to easement holders in general, the present tendency is to impose upon easement holders the duty to exercise reasonable care for the safety of persons who are trespassers with respect to the landowners. Langazo v. San Joaquin S. & P. Co., 32 Cal. App. 2d 678, 90 P. 2d 825 (1939); Wise v. Southern Indiana Gas & Electric Co., 109 Ind. App. 681, 34 N.E. 2d 975 (1941); Baker Utilities Co. v. Haney, 203 Okla. 91, 218 P. 2d 621 (1950); Humphrey v. Twin State Gas & Electric Co., 100 Vt. 414, 139 Atl. 440 (1927). See also, Restatement, Torts § 386 (1934).

[8] Section 60.17 of the Federal Civil Aeronautics air safety regulations, 14 C.F.R. § 60.17 (1955) provides;

". . . Except when necessary for take-off or landing, no person shall operate an aircraft below the following altitudes.

". . . Over other than congested areas. An altitude of 500 feet above the surface, except over open water or sparsely populated areas. In such event, the aircraft shall not be operated closer than 500 feet to any person, vessel, vehicle or structure."

It should be noted that this open water exception to Section 60.17 had never been considered by a court prior to the *Yoffee* case. In determining that the river at the scene of the accident was open water, the court recognized that the river was two miles wide, and that the nearest bridge was two miles away.

But even if the Susquehanna River was not considered open water, it may be that the pilot in the *Yoffee* case was flying above sparsely populated land so as to come within the alternative wording of the exception to the 500 foot safety altitude allowed under Section 60.17. The court considered the area adjacent to the transmission line to be sparsely populated, although it declined to expressly state that that fact in itself would allow the air above to be considered navigable air space.

is obstructed by invisible power lines located adjacent to an airport runway, as in *Strother v. Pacific Gas & Electric Co.*,[9] and *La Com v. Pacific Gas & Electric Co.*[10] Since such a flight path constitutes the minimum safety altitude, a flyer thus obstructed is lawfully within the navigable air space at the time of the accident.[11] In these two situations, a pilot flying within a zone authorized for his use would not become a trespasser, if at all, until he collides with the fixture erected by the landowner. However, whether lawful flight should cease when the collision occurs—a collision caused by the landowner's failure to disclose the existence of his fixture, is questionable. It seems justifiable to qualify the landowner's right to utilize the air space above his property to a *reasonable* use. If so, the erection of an undisclosed aerial hazard would be just as much an unlawful act as the property owner's obstruction of adjacent land highways.[12] To classify the pilot as a trespasser merely because he is injured by an undisclosed fixture would be exceeding the bounds of both the law and common sense.[13]

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[9] 94 Cal. App. 2d 525, 211 P. 2d 624 (1949).

[10] 132 Cal. App. 2d 114, 281 P. 2d 894 (1955). In both the *Strother* and *La Com* cases, the court refused to impose a then applicable federal obstruction marking regulation on the grounds that federal safety regulations were not applicable to solely intrastate flight. It should be noted that the only federal regulations presently in effect which deal with the marking of obstructions situated near airports is that notice of construction or alteration on or near airways be given to the Civil Aeronautics Board. 17 Fed. Reg. 4137 (1952).

[11] The Civil Aeronautics Board interpretation of Regulation 60.17, see note 9 *supra*, issued on July 22, 1954, explains that "an aircraft pursuing a normal and necessary flight path in climb after take-off or in approaching land is operating within the navigable air space." 19 Fed. Reg. 4602 (1954). In light of the CAB interpretation of Section 60.17, it may be that if the flight path during landing or take-off is "normal and necessary," such a path will be considered within the navigable air space. But when the path is so low as to unreasonably interfere with landowners use and is not "normal and necessary," such flight could be enjoined as not being within the navigable air space. And when the glide path is "normal and necessary," the property owner could seek damages if such flight unreasonably interferes with his enjoyment of the property. See concurring opinion of Chief Justice Stern in Gardner v. Allegheny, 382 Pa. 88, 119, 114 A. 2d 491, 506 (1955). The position of the CAB that a "normal and necessary" glide path constitutes the lower limit of the navigable air space was upheld by the court in Allegheny Airlines v. Village of Cedarhurst, 238 F. 2d 812 (2d Cir. 1956).

It was argued in the Cedarhurst case that regulations allowing a plane, in landings or take-offs, to invade the air space beneath 1000 feet represent an unconstitutional delegation of legislative powers. Section 2(b), 52 Stat. 980, 49 U.S.C. 402(b) (1938) directed the CAB to regulate air transportation in a manner which would promote maximum air safety. The contention that the word "safe" was not a sufficiently definitive standard was rejected by the court in holding that it is not necessary that Congress establish a measure which can be applied with arithmetic certainty. In the case of landings and take-offs, a statutory height at which planes could fly would be unwieldy since such an altitude necessarily varies with the physical peculiarities of each area.

[12] Hoyt v. Public Service & Electric Co., 117 N.J.L. 106, 187 Atl. 43 (1936); Fisher v. Mt. Vernon, 41 App. Div. 293, 58 N.Y.S. 499 (1899); Scalet v. Bell Tel. Co., 291 Pa. 451, 140 Atl. 141 (1928).

[13] Can it be said that such flight constitutes the doing of an unlawful act or of a lawful act in an unlawful manner to the injury of another's person or property? See Waco Cotton Oil Mill v. Walker, 103 S.W. 2d 1071, 1072 (Tex. Civ. App. 1937). Furthermore, under this definition, the landowner should be regarded as the trespasser to the person of the flyer, rather than the flyer to the property of the landowner. This unexpressed result was reached in the *Yoffee* case where the plaintiff's suit was in trespass for the wrongful death of the flyer. Subject to the jury determination of contributory negligence, presumably the pilot's estate would be allowed recovery. It should be noted that even though a duty of disclosure should exist, a pilot who was contributorily negligent would not be allowed to succeed.

Furthermore, it has been suggested that the classic trespass doctrine should be reluctantly applied to the aviator-landowner controversy—it should be replaced with the laws of negligence and nuisance. Green, *Flight of Aircraft—Right or Privilege?* 6 J. Air L. & Com. 201 (1935). See also, Sweeney, *Adjusting the Conflicting Interests of Landowner and Aviator in Anglo-American Law.* 3 J. Air L. & Com. 329 (1932).

Unfortunately, the pilot may be barred from recovery if the courts persist in treating the pilot as a trespasser—one towards whom no duty of disclosure exists. The court in the *Yoffee* case, however, alluded to such an obligation when it suggested that even fee holders could not be oblivious to lawful flight over the river. Nevertheless, the few cases which have discussed the liability of property owners to injured pilots have generally treated the flyers as trespassers. In both the *Strother* and *La Com* cases, the court was reluctant to impose liability upon the power company whose undisclosed lines caused the injury on the grounds that such use of the wires was a reasonable enjoyment of the property. It was emphasized that the imposition of such a duty would be as flagrant a violation of due process as requiring the owner of a tall building to remove it at his own expense for the protection of aviators.[14] However, to analogize the duty of marking structures to the compulsion for a man to dismantle a tall building is to overlook the basic distinction between reasonable and unreasonable duties.[15] Therefore, it is suggested that a liberal and more realistic approach to the problem should be adopted.

Relation of Duty of Disclosure to Present Common Law Theories

Although the common law did not contemplate the landowner-aviator conflict, courts might be reluctant to impose a duty of disclosure upon property owners unless the duty could be found within the traditional concepts of the common law. However, such a duty might be based on the negligence theory if the courts recognize the distinction between faultless intruders and wrongdoing intruders—both of whom have been traditionally regarded as trespassers.[16]

Wrongdoing intruders might be those entering the property to remove fruit from an owner's orchard. In such a situation, an action for damages would lie against the trespasser and, correspondingly, no affirmative precautions need be taken for the safety of such wrongdoers even though their intrusion might have been anticipated. Among the class of faultless intruders would be one entering because of necessity, such as a ship mooring to the property owner's dock during a storm,[17] or by accident, as, for example, an aviator flying within the navigable air space who intrudes upon the landowner's fixture merely because it was not visible to him.[18] The significant question presented in applying this distinction is upon what basis may a property owner be required to exercise affirmative precautions for the protection of faultless intruders whose presence should be anticipated. In answering this question, it is helpful to consider the responsibility of property owners to licensees.

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[14] La Com v. Pacific Gas & Electric Co., see note 10 *supra*.

[15] This distinction was emphasized by Justice Dooling in his dissent to the *La Com* case, at 132 Cal. App. 2d 119, 281 P. 2d 897 (1955).

[16] Green, *Landowner v. Intruder, Intruder v. Landowner; Basis of Liability in Tort*. 21 Mich. L. Rev. 495 (1923). In this article, Dean Green has endeavored to establish a justifiable basis for the attractive nuisance cases in the law of negligence. The young children considered in these cases have been regarded by Green as faultless intruders since their age generally precludes their possessing the capacity and intent to injure the landowner's property.

[17] Ploof v. Putnam, 81 Vt. 471, 71 Atl. 188 (1908)—(plaintiff sought refuge in storm by mooring his sailboat to defendant's dock; defendant under duty not to unlash plaintiff's boat.) See also, Campbell v. Race, 61 Mass. (7 Cush.) 408 (1851), (traveler on highway rendered impassable by a sudden snowstorm may pass over adjoining fields, doing no unnecessary damage, without being guilty of a trespass). See also, Morey v. Fitzgerald, 56 Vt. 487, 48 Am. Rep. 811 (1884).

[18] Other examples of such intruders entering by virtue of their own right might be firemen, policemen and other public officials entering in the course of their employment. Meirs v. Fred Koch Brewery, 229 N.Y. 10, 127 N.E. 491 (1920). See also, Bohlen, *Owners' Duty to Those Rightfully on Premises*, 89 U. Pa. L. Rev. 142, 237, 340 (1921).

As distinguished from trespassers, licensees are those entering upon land with the owner's consent. Although a landowner would owe no duty of disclosure towards a trespasser, if the person received permission to enter, his intrusion as licensee would be faultless. Furthermore, the fact that the landowner gave his consent would also put him on notice of the licensee's presence. If the use to which the land is put creates a high probability of injury to others, an affirmative duty to disclose concealed dangers should be imposed upon landowners in favor of those who enter without fault and whose presence should be anticipated. Therefore, since the landowner's consent to the licensee's entry precludes it from being regarded as a wrongdoing, and also informs the owner of the licensee's presence, the owner should be under an obligation to warn licensees of the existence of hidden dangers.[19]

It appears that the status of a faultless intruder is closer to that of a licensee than of a trespasser because he enters without fault, as by necessity or accident. However, the faultless intruder differs from a licensee to the extent that his entry is without consent. But since one of the functions of consent is to prevent a licensee from being regarded as a wrongdoer, it would seem that the lack of consent to the faultless intruder's entry would be partially cured by the fact that such an intrusion was not a wrongdoer in the first instance. Furthermore, there are many situations in which the owner does or should anticipate the presence of such an intruder.[20] No doubt a property owner whose land adjoins an airport runway, or over whose land flight frequently passes at low altitudes, should recognize the significant danger created by undisclosed aerial structures.

Thus, the same elements that raise an affirmative duty of disclosure in favor of licensees (notice of faultless entry and high probability of danger) may exist in the faultless intruder area. Consequently, such an intruder should bear the same relationship to the landowner as does the licensee. As Professor Bohlen has suggested, such affirmative duties in favor of faultless intruders arise as a matter of law as the price paid for voluntarily entering into business or the beneficial use of property (other than mere passive ownership) in a manner which creates a high probability of injury to others.[21]

Although not expressed in similar terms, the results of this analysis have been reached by the courts in many instances. It has frequently been stated, with particular applicability to power companies, that if the actor's

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[19] Such an affirmative obligation was imposed upon landowners in favor of licensees in Public Service Company v. Elliot, 123 F. 2d (1st Cir. 1941); Campbell v. Boyd, 88 N.C. 129, 43 Am. Rep. 740 (1883); Smith v. Southwest Missouri R. Co., 333 Mo. 314, 62 S.W. 2d 761 (1933).

[20] For example, a farmer whose land adjoined a county road should expect the presence of travelers upon his pastures in the event that a snowstorm temporarily obstructed passage on the road. See Campbell v. Race, note 17 *supra*. Similarly, a dock owner should anticipate that boats caught in sudden squalls might seek refuge by mooring to his dock. Ploof v. Putnam, *supra* note 17.

[21] Bohlen, *Affirmative Obligations in the Law of Torts*, 53 U. Pa. L. Rev. 209, 235 (1905).

Another theory which might be invoked, as was suggested in the *Yoffee* case, is the maxim of *sic utere* (everyone must use his property as not to injure that of another). But as Dean Green has commented, this theory is but an imperfect statement of the general negligence test. See *Landowner v. Intruder, Intruder v. Landowner; Basis of Liability in Tort, supra* note 16. Moreover, it should be noted that the doctrine usually has been applied only in cases involving disputes between adjoining landowners, where clearly established rights and duties are recognized. This doctrine should not be applied as a means to avoid deciding the duty question necessarily presented in negligence cases.

conduct creates a high probability of danger, the actor is bound to use the highest degree of care practicable to avoid injury.[22] Furthermore, a duty has been imposed upon landowners for the protection of highway users from risks created by obstructions which were so situated on the premises that possibility of injury to travelers was readily apparent.[23] A unique situation arises in analogizing surface highway with aviation cases. For in the former, liability is imposed upon the landowner even though he has no right to vary the boundaries of the surface highway by his own act. But with respect to air highways, the owner's mere utilization of the space above his property diminishes the extent of the airlane—an airlane congressionally authorized for flight. Justifiably, a correspondingly greater duty should accompany this unique privilege. At least, a lower standard of care should not be tolerated.[24]

A striking forecast of this present landowner-aviator controversy was presented in *Hynes v. New York R.R.*[25] In that case, a plank attached to the defendant's right of way was used by bathers in the Harlem River as a diving board. While the decedent was standing on the plank, a cross arm with electric wires fell from an overhanging pole and caused his death. In sidestepping the defendant's contention that no duty was owed to trespassers,[26] Justice Cardozo stated that although landowners are not bound to anticipate danger to trespassers, they cannot be indifferent to the presence

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[22] Stedwell v. City of Chicago, 297 Ill. 486, 130 N.E. 729 (1921); Ferrel v. Dixie Cotton Mills, 157 N.C. 528, 73 S.E. 142 (1911); Foley v. Pittsburg-Des Moines Co., 363 Pa. 1, 68 A. 2d 517 (1949); MacDougall v. Pennsylvania Power & Light Co., 311 Pa. 387, 166 Atl. 589 (1933); Gulf, C. & S. F. Ry. Co. v. Russel, 82 S.W. 2d 948 (Comm. of App. Tex. 1935); Talkington v. Washington Power Co., 96 Wash. 379, 165 Pac. 87 (1917); Restatement Torts, § 500, comment d (1934).

[23] Panhandle & S. F. R. R. v. Willoughby, 58 S.W. 2d 563 (Tex. Civ. App. 1933); Athens Electric Light & Power Co. v. Tanner, 225 S.W. 421 (Tex Civ. App. 1920); (rancher driving cattle at night injured by guy wire adjacent to road).

In the following cases involving night time collision of automobiles with electric poles located in a portion of a street or highway, the defendant was held to be under a duty to disclose the existence of his poles: Aubin v. Duluth Street Ry. Co., 169 Minn. 342, 211 N.W. 580 (1926); State v. Cox, 327 Mo. 152, 36 S.W. 2d 102 (1931); Cunningham v. Springfield, 31 S.W. 2d 123 (Mo. App. 1930); Lovett v. Manchester Street Ry. Co., 85 N.H. 345, 159 Atl. 132 (1932); Nelson v. Duquesne Light Co., 338 Pa. 37, 12 A. 2d 299 (1940).

A similar duty was imposed in the following cases involving automobile collisions with poles situated on the owners' premises but leaning over the highway: Hoyt v. Public Service & Electric Co., 117 N.J.L. 106, 187 Atl. 43 (1936); Fisher v. Mt. Vernon, 41 App. Div. 293, 58 N.Y.S. 499 (1899); Scalet v. Bell Tel. Co., 291 Pa. 451, 140 Atl. 141 (1928).

[24] Comparably, when landowners have allowed the public to use their property as pathways for a number of years, a duty of disclosure has been imposed when hazards have been subsequently placed along the road. Phipps v. Oregon R. and Navigation Co., 161 Fed. 367 (9th Cir. 1908); Rooney v. Woolworth, 78 Conn. 167, 61 Atl. 366 (1905); (excavation across path); Graves v. Thomas, 95 Ind. 361, 48 Am. Rep. 727 (1883); (excavation along path); Carskaddon v. Mills, 5 Ind. App. 22, 31 N.E. 559 (1892); (barbed wire across path); Brewer v. Furtwangler, 171 Wash. 617, 18 P. 2d 837 (1933); (trespasser attacked by vicious dog allowed recovery); Restatement, Torts, §§ 334-36 (1934).

Thus, when a property owner recognizes frequent flight above his premises, the construction of artificial structures hazardous to such flight should be similarly disclosed.

[25] 231 N.Y. 239, 131 N.E. 898 (1921).

[26] It was imperative to overcome the trespass theory since the decedent was too old to justify use of the attractive nuisance doctrine.

of travelers upon the adjacent public highways.[27] If trespass was not an insurmountable hurdle in the *Hynes* case, where the injured party was aware of his intrusion, certainly trespass is totally inappropriate in the aviator case. Not only is the pilot proceeding along a public air highway, but he is also unaware of the existence of the fixture until the accident occurs. In such circumstances, the landowner and aviator should stand on an equal footing; the conduct of each should anticipate the lawful presence of the other.

Closely aligned to the theory affording protection to highway users under the law of negligence, is the public nuisance doctrine. The court in the *Yoffee* case suggested that this concept was applicable by stating that the defendant's license to span the river did not absolve it from liability for creating a "hazard to the public."[28] A public nuisance on a highway has been defined as any wrongful act or omission upon a highway which prevents the public from safely passing along.[29] Furthermore, the Supreme Court of the United States has announced that the public rights of navigation in the public highways of the air are analogous to those recognized

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[27] "We are asked to ignore the public ownership of the circumambient spaces of air and water . . . Bathers in the Harlem River . . . were in the enjoyment of a public highway, entitled to protection against the defendant's wires . . . A plane of private right had been interposed between the river and the air, but public ownership was unchanged in the space below and above. . . . There will hardly be denied that a cause of action would have arisen if the wire had fallen on an aeroplane proceeding above the river.

"Here, structures and ways are so united and comingled, superimposed upon one another, that the fields (trespass and rights of highway users) are brought together.

"In such circumstances, there is little help in pursuing general maxims to ultimate conclusions. They have been framed (with different purposes in mind) . . . Rules appropriate to spheres which are conceived of as separate . . . cannot both be enforced when the spheres become concentric. There must be readjustment or collision. In one sense, and that a highly technical and artificial one, the river at the end of the springboard is an intruder on the adjoining lands, in another sense, and one that realists will accept more readily, he is still on the public waters in the exercise of public rights."

[28] Facts presented in the *Yoffee* case which suggested the unreasonable flight risk created by the undisclosed wires were the following:

a. The transmission towers, which were concealed among tall timbers and vegetation and the copper wires could not be seen at any altitude. A pilot flying at 800 feet, aware of the presence of the towers, could not see them until he was directly above them. At other river crossings, the defendant's electric lines were aluminum coated and visible from a distance of ten miles. In such areas, the towers constructed on the river bank were considered prominent landmarks.

b. The pilot's airplane was furnished with current aeronautical maps, and although New York and Pennsylvania maps normally disclose transmission towers, no obstruction was indicated at the place where the accident occurred. This omission may have been caused by the defendant's failure to notify the CAB of the erection of such wires, pursuant to a current federal regulation. 17 Fed. Reg. 4137 (1952). See *supra* note 10. Another cause of the omission may have been the fact that the wires were so difficult to discern that they escaped the notice of the cartographers.

c. Two and a half years prior to the accident in question, the same transmission line was struck by another pilot. Seven months after the *Yoffee* collision, a helicopter collided with the lines.

d. Civil Aeronautics statistics revealed that in 1947 over 1,000 licensed aircraft were located on 92 bases within a 60 mile radius of the transmission lines. This figure also includes licensed seaplanes based on the Susquehanna River.

[29] Gleason v. Hillcrest Golf Course, 265 N.Y.S. 886, 148 Misc. 246 (1933); (motorist injured by golf ball hit from course adjacent to public highway).

Even if the act complained of was performed on private property, liability is not affected. And irrespective of its inherent lawful purpose, if the act detracts from the safety of travelers, it constitutes a nuisance. Shepard v. Creamer, 160 Mass. 496, 36 N.E. 475 (1894); Shipley v. Fifty Associates, 106 Mass. 194, 8 Am. Rep. 318 (1870); Klepper v. Seymour House Corp., 246 N.Y. 85, 91, 158 N.E. 29, 31, (1927).

in the navigable waters.[30] Therefore, it may be that the maintenance of an undisclosed power line, within the navigable air space, constitutes a wrongful act which obstructs safe passage through the public airways. Moreover, the public nuisance doctrine has been specifically applied to aviation in the case of *Commonwealth v. Von Bestecki*, where further construction of a tower located adjacent to an airport was enjoined.[31] It was held that the erection of a mechanical agency capable of causing death or great bodily harm to ordinary trespassers, if such is dangerous to the public, is indictable as a nuisance. A similar result was reached by a Canadian court in a recent case where a flyer attempting to land a seaplane collided with the defendant's power line.[32] In allowing the pilot a right of recovery, the court recognized that the defendant's maintenance of such lines constituted a public nuisance at common law.

CONCLUSION

Recognition of the vital status which aviation occupies in our present society suggests that the horse and buggy law relied upon in the *Strother* and *La Com* cases has become antiquated. Therefore, in order that harmony between flyers and landowners may be approached, it is imperative that some compromise be made. Balancing the value of human life with the cost of disclosing the existence of power lines suspended within the navigable air space leads to the conclusion that disclosure must be made. In addition, the imposition of such a duty can be set within the framework of the common law, where it has frequently been recognized that one who uses property in a manner which creates a high probability of danger to those whose presence may be readily anticipated must exercise a correspondingly high degree of care.[33] Thus, a picnicker touching high voltage wires concealed in mountain underbrush has been allowed recovery under a dangerous instrumentality theory.[34] And highway users injured by obstructions caused by adjacent property owners have recovered on both negligence and public nuisance theories.[35] If the common law has overcome historic resistance in these areas, certainly it should not deal otherwise with the field of aviation. Furthermore, imposition of a duty of disclosure will not stifle the

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[30] Braniff Airways v. Nebraska State Board, 347 U.S. 590, 596-7 (1954).

[31] 30 Pa. D. & C. 137 (1937). Although there was an apparent intent by Von Bestecki to inflict harm upon aviators, intent is not an essential element of nuisance. Negligent use of an otherwise utilitarian mechanism will support a nuisance action as long as some interest common to group exercising a public right is injured. Bush v. City of Norwalk, 122 Conn. 426, 189 Atl. 608 (1937); Denny v. Garavaglia, 333 Mich. 317, 52 N.W. 2d 521 (1952); Khoury v. Saratoga County, 267 N.Y. 384, 196 N.E. 299 (1935).

[32] Stephens and Mathias v. MacMillan, 2 D. L. R. 135 (1954). The defendant owned an island situated in a small lake and suspended power lines to the mainland some 350 feet away. The wires had been erected at a height of about 30 feet without securing the requisite permission under the Navigable Waters' Protection Act, Can. Rev. Stat. c. 140, § 4 (1927). (The purpose of this statute was to approve sites of proposed projects and to insure that only such structures which would not interfere with navigation would be erected.) In approaching the water for a landing, the plaintiff's airplane struck the defendant's power line. Irrespective of any statutory violation, the court held that the wires would have constituted a public nuisance at common law—an interference with the right of navigation as it was capable of being exercised. In the MacMillan case, no issue of disclosure was raised. However, it should be noted that discernible wires suspended within the air space should not constitute a public nuisance.

[33] Kimber v. Gas Light & Coke Co., Ltd., (1918) 1 K.B. 439.

[34] Cornucopia Gold Mines v. Locken, 150 F. 2d 75 (9th Cir. 1945).

[35] See notes 23 and 31 *supra*.

utility industry's right to erect structures, but will reflect the ability of the law to satisfy changing social demands. The foresight of Justice Cardozo in the *Hynes* case demonstrates the progress which the courts should employ to avoid adherence to the ancient doctrines manifested in the *Strother* and *La Com* cases. In accordance with this approach, it was recently said that:

> "Fortunately, the principal aim of the law today, and of judicial decisions, is not so much to conform with origins and mere historical continuity, but rather to follow the tracks forward so that they may be kept abreast of the ever-developing changes in our social, economic and government life and with our current conceptions of morality and justice."[36]

[36] Address by Chief Justice Stern, Pennsylvania Bar Association, June 24, 1953.

DIGEST OF RECENT CASES

AIR FORCE JET CANOPY—CIVILIAN ON GROUND KILLED—FEDERAL TORT CLAIMS ACT—NEGLIGENCE

Bright v. United States

149 F. Supp. 620 (E.D. Ill. Nov. 5, 1956)

While approaching an airport for a landing, the pilot of an Air Force jet plane flew into thunderstorms which were not previously reported to him by the airbase personnel. When the pilot bailed out after losing control of the plane, the ejected jet canopy fell to the ground and killed the plaintiff's intestate. In a wrongful death action under the Federal Tort Claims Act, lability was imposed upon both Scott Air Force Base and the jet pilot. The court, sitting without a jury, found that the airbase was negligent in failing to inform the pilot of the storm. Moreover, the pilot was considered negligent for his failure to fly around the storm and, once having entered the turbulence, for neglecting to prepare himself for any eventuality which would prevent him from losing control of the aircraft. Such negligence was regarded as the proximate cause of the decedent's death and the doctrine of *res ipsa loquitur* was held inapplicable.

ANTI-TRUST LAWS—RAILWAY JOINT MILITARY PASSENGER AGREEMENT—SUPPLEMENTAL AIR CARRIERS

Aircoach Transporation Assoc. v. A.T. & S.F. Ry. Co.

5 CCH Aviation L. Rep. 17,472 (D.C. July 5, 1957)

The railroad practice of offering concerted quotations of special rates to military personnel under the Joint Military Passenger Agreement has been declared illegal *per se* as violating the anti-trust laws. In a suit brought by supplemental air carriers, the United States District Court for the District of Columbia granted a motion for summary judgment except as to the question of treble damages, and issued a preliminary injunction against the defendant railroads. It was further held that immunity from the anti-trust laws was not conferred by the Interstate Commerce Act and that primary jurisdiction over the subject matter of the suit was not exclusively vested in the Interstate Commerce Commission.

AIRCRAFT COLLISION WITH POWER LINES—NO ABSOLUTE LIABILITY

Southern California Edison Co. v. Coleman

5 CCH Aviation L. Rep. 17,415 (Cal. Super. April 29, 1957)

While approaching an airport for landing purposes, a sudden downdraft caused the defendant's plane to collide with the plaintiff's power lines. In a suit for damages to its equipment, the power company alleged that irrespective of any negligence on the part of the pilot, as a trepasser to the power lines, the defendant was absolutely liable for damages resulting from the collision. The trial court's judgment for the defendant was grounded upon the view that any trepass which existed was unavoidable, as the downdraft was considered an act of God. In affirming this judgment, the court emphasized that there may be no liability without negligence. Whereas absolute liability was formerly imposed upon aircraft operators, flight is no longer considered an ultrahazardous activity if the airplane is being properly handled by a competent pilot.

BOOK REVIEW

THE CONTIGUOUS AIR SPACE ZONE IN INTERNATIONAL LAW. By John Taylor Murchison, B.C.L. (U.N.B.) L.L.M. (McGill). Published by Department of National Defense, Ottawa, October, 1955, Revised to December 1, 1956, 113 pp.

Squadron Leader Murchison has written an interesting, informative, and provocative work rationalizing the creation by United States and Canadian authorities of the ADIZ's and CADIZ's—those towering chunks of air space forming a mid-century Maginot Line around the greater part of the North American Continent, extending seaward up to three hundred miles.

The Air Defense Identification Zones—ADIZ (U.S.), CADIZ (Canadian)—were established by parallel regulatory action of the Civil Aeronautics Administration (Part 620) and of the Canadian Department of Transport, Air Services Branch (NOTAM 22/55) respectively. These zones are described in detail in each regulation and are laid out with reference to coordinates of longitude and latitude. Most of the zones extend well out over the high seas, and this fact is the basis for the book. Obviously to the extent these zones are descriptive only, they are well within the power of any state to create. Any country may describe any geographic area, bounded in any way it sees fit, and give it whatever name it likes. It is only the application or attempted application of rules within such zones that poses problems. Since the Regulations referred to do impose certain rules for aircraft operating in or into these zones, problems of jurisdiction exist.

Author Murchison approaches his task by briefly describing the regulations of the two governments. He then discusses the rules laid down with reference to the Chicago Convention of 1944 and concludes that there is no violation of that treaty. Thereafter he approaches the problem as one of international law apart from treaty and analogizes the rules to the claims made to the subsoil of the continental shelf, and to the broader aspects of Maritime Law. He finally justifies them as proper governmental action based on the doctrines of necessity and of self-preservation.

In dealing with the question whether the rules are properly grounded in the municipal laws of Canada and the United States respectively, Author Murchison concludes that the legal basis in Canada is highly doubtful and that "it would appear that legally speaking, a violation of these rules outside the territorial waters of Canada would lead to nothing but an exercise in frustration for the conclusion must be reached that the punitive provisions of the Act would not apply for the reason that a violation of the NOTAM which lacks the authority or sanction of the Act, would not be a violation of that Act."

With respect to the American rules, the author states "The establishment of ADIZ, on the other hand, is solidly founded on American municipal law for Part 620 is based on an executive order by the President, and as such has the force of law in the United States." It may be questioned whether this is not too charitable a conclusion. The executive order to which he refers in turn finds its authority in Title 12 of the Civil Aeronautics Act, as amended. Section 1203 of that Title reads in part as follows:

> "The Secretary of Commerce is authorized to establish such zones or areas in the air space above the United States, its Territories and possessions (including areas of land or water administered by the United States under international agreement) as he may find necessary in the interests of national security. . . ."

Consequently the validity of the action by the Secretary of Commerce, insofar as these zones are established over the high seas, depends on whether these are areas of "water administered by the United States under international agreement." They quite obviously are not. Consequently the basis for American action would appear to be no sounder than the Canadian.

Murchison finds that there are minor differences in detail between the two sets of regulations, and points out that the American rules apply only to aircraft which subsequently enter United States territory, whereas the Canadian rules purportedly apply to all aircraft passing through the zone irrespective of destination. This is true at least in part. The Canadian regulations require position reporting of all aircraft passing through the zones, whereas such reporting in the case of the ADIZ is required only for aircraft entering the United States. However, both sets of regulations require that flight plans be filed by all aircraft prior to penetrating an ADIZ (Section 620.11 Regulations of the Administrator) or a CADIZ (Section 2.3 Canadian NOTAM). Each set of regulations requires reasonable adherence to the flight plan both with respect to time, location and altitude. Consequently each set of rules applies, to some extent, to aircraft traversing the identification zone as well as to aircraft destined for the territory of the country concerned.

In discussing the rules applicable in the CADIZ's and ADIZ's in relation to commitments under the Chicago Convention, the author points out that the subject of sovereignty over the high seas is not dealt with in that Convention. He does advert to Article 12 of the Chicago Convention, dealing with rules of the air, which provides in part that "over the high seas, the rules in force shall be those established under this Convention." He concludes that this provision has no relationship to the rules promulgated for the identification zones, since he is of the opinion that the rules of the air are "rules of the road" only and that security considerations lie outside their purview.

While we can join with the author in his conclusion that security rules would be compatible with obligations under the Convention, this would be true only so long as the rules for the security control of air traffic do not conflict with the international rules of the road laid down by the Convention. In this case it is to be noted that both the Canadian and the American regulations call for the filing of a flight plan including a statement of cruising altitude. In each case adherence to the flight plan is mandatory. If this requirement is applied to mean maintenance of a fixed altitude above the surface, it could very easily conflict with the international rules, which call for cruising at a constant *indicated* altitude at a fixed barometric setting of the altimeter. Flight levels consequently vary with the barometer. The indicated altitude under the international rules could differ by as much as a thousand feet from the absolute altitude over the surface. Consequently it is submitted that to the extent the security rules may be in direct conflict with the rules of the air laid down by ICAO they are violative of the provisions of the Convention, notwithstanding the difference in purpose of the regulations concerned.

The most interesting parts of the book are Chapters IV and V dealing with analogies in the Maritime Law and with the doctrine of necessity and self-preservation. In the former the author discusses the doctrine of the freedom of the seas as limited by the "hovering laws" and the doctrine of hot pursuit. However, as the author appears to agree, the doctrine based on the hovering acts and similar enactments of the past have been largely limited to matters concerning customs and sanitary laws.

In Chapter V the author takes even a broader view of the subject and justifies the regulations in the ADIZ's and CADIZ's under the doctrine of

self-preservation combined with the doctrine of necessity, quoting Elihu Root's statement that "every sovereign State has a right to protect itself by preventing a condition of affairs in which it will be too late to protect itself."

The crux of the author's discussion in regard to necessity and self-preservation is that "the very existence of the State makes these identification zones seaward a necessity." But since an air attack may come from any direction, over either land or water, there would appear to be equal necessity for such an identification zone over land areas under the sovereignty of other states. While the problem does not arise in connection with the common defense of the North American Continent, it would become a very real one in connection with certain European countries. Is landlocked Switzerland to be entitled any less to avail itself of the doctrine of necessity than water-surrounded Australia? Yet if Switzerland were to enact SADIZ's, they would perforce have to lie over territories of neighboring states. Such an application of the doctrine of necessity would be completely incompatible with the sovereign rights in the air space of the neighboring states.

In one respect the book is disappointingly silent. There is no discussion of, nor justification based upon, the fact that the rules, in both instances, are designed to aid in identifying aircraft. The approach of the book has been a geographical one, rather than one based on the subject matter of the rules themselves in their application to conduct over the high seas.

Yet one of the traditions of the seas is the obligation of vessels plying them to identify themselves. In the *Marianna Flora*, 11 Wheat. 1, 6 L. Ed. 405 (U. S. Sup. Ct. 1826), the Court, speaking through Mr. Justice Story, held that an overtly hostile act on the high seas by a Portuguese merchantman, coupled with failure to identify herself, completely excused an attack made by a U. S. naval vessel on her, even though the hostile act was committed under the mistaken belief that the American vessel was a pirate. Moreover, the Court held that the further action of the American commander in putting a prize crew aboard the Portuguese ship and sailing her to a U. S. port for adjudication was not an act for which damages should lie under the circumstances. The equivocal conduct on the part of the merchantman, including the failure to show its flag, was complete justification for the attack, capture, and detention by the U. S. vessel, which had been commissioned to sail against pirates.

From sailing vessels to aircraft is a long step, but the need for identification in the new element is still recognized by the international community. Thus, Article 20 of the Chicago Convention requires that "Every aircraft engaged in international air navigation shall bear its appropriate nationality and registration marks."

Thus, provision is made for identification to the eye. However, with radar now in general use, is there not a further obligation incumbent upon both vessels and aircraft operating on or over international waters to take reasonable measures to identify themselves to the radar eye *under circumstances where failure to do so could give all the signs of a hostile or illegal mission?* Perhaps with further development of IFF transponders it will be possible for ships and aircraft to identify themselves automatically and specifically. However, in the present state of the art, the flight plan filed in advance is the best method for linking up the blips on the radar screen with the airplanes in the sky.

Basically the regulations for the CADIZ's and the ADIZ's do no more than require such identification—even the position reporting requirement of the Canadians is justifiable under this objective. Admittedly filing a flight plan and reporting are a burden—but so is hoisting a flag, and both are reasonable obligations.

Under such an approach the CADIZ's and ADIZ's cease to be zones within which Canada and the United States attempt to exercise extra-territorial power. They become merely descriptive of one of the conditions which would make the failure to identify oneself an equivocal and suspicious act. In this connection there is a vast difference between mid-ocean operations, in the present state of the art, and operations within 15 minutes' cruising range of the coast by supersonic bomber. Aircraft operating outside the territorial jurisdiction of any state, but within so short a distance of the nearest country's coast, place themselves in an equivocal and suspicious position if they refuse to identify themselves—particularly in view of the history of Pearl Harbor.

In other words, given the present international climate, the history of the last 20 years, 1200 mile per hour bomber speeds, atomic and fission bombs, and radar search, is it not incumbent upon a craft flying within easy attacking range of a country's coast to say who he is and allow himself to be identified as a blip on the radar screen? Obviously, the closer the aircraft comes to the coast line, the greater is the duty to identify himself. The ADIZ's and CADIZ's over the high seas can be regarded as declarations on the part of Canada and the United States that foreign aircraft in those areas will be regarded as acting suspiciously, equivocally, and with apparent hostile intent if they do not identify themselves. Apparent hostility was the conduct of the *Marianna Flora* which justified Lieutenant Stockton's attack and seizure. It is equal justification, it is submitted, for "inflight interception by military interceptor aircraft" (Sec. 2.10.1 Canadian NOTAM).

As for the criminal penalty provision of the United States regulation, it is most doubtful whether this could be enforced in respect of a violation of an ADIZ regulation over the high seas. Apart from international law, the Civil Aeronautics Act does not give the Secretary of Commerce the right to proclaim any such penalty outside the jurisdiction of the United States. But "interception by military interceptor aircraft" would, it is submitted, be entirely justifiable for the United States as well as Canada.

The foregoing criticisms, however, do not adversely affect the value of the book. It is a definite contribution to learning in a field where the literature is sparse, and the promise of further writing dim because of the transitory nature of the specific problem. At the outset of this review, the identification zones were likened to the Maginot Line. Already the intercontinental ballistic missile is making them obsolescent. True space flight will render them virtually useless in their present configurations.

One continuing principle, however, appears clear. Freedom to use international channels of communication—the high seas, the air above, or the space beyond—does not include freedom to prey upon other commerce or to mount an attack against any nation; and it devolves upon those who would use such channels in peace to so conduct themselves that their *bona fides* are apparent. Included is the obligation of identifying craft and mission by whatever reasonable means is appropriate, wherever failure to do so would prompt the observer, under the surrounding circumstances, to conclude the mission was hostile. This is true whether such surrounding circumstances point to attacks by pirates on the Spanish Main in 1825, enemy activity in a coastal ADIZ in 1957, or surprise action by space marauders who war upon the interplanetary commerce of a time yet unborn.

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